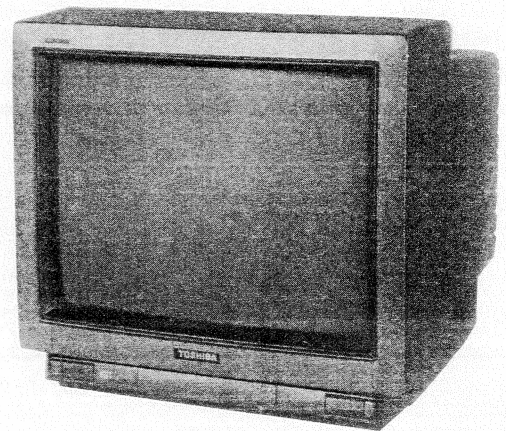


TOSHIBA

COLOUR TELEVISION

150F6D



SPECIFICATIONS

| | |
|---------------------------|--|
| Power Input Rating: | 67 watts, AC 220 volts, 50 Hz |
| Aerial Input Impedance: | 75 ohm unbalanced type for UHF |
| Receiving Channels: | VHF channels channels E2 to E4, E5 to E12 and S1, S2 to S20 |
| | UHF channels channels 21 to 68 |
| Intermediate Frequencies: | Picture I-F carrier frequency 38.9 MHz Sound I-F carrier frequency 33.4 MHz Colour sub-carrier frequency 34.47 MHz |
| Chassis Construction: | IC Solid State, Horizontal Chassis |
| Picture Tube: | 15 in. A36EAM00X01, 356 mm (measured on diagonal of viewable picture area), 90° Deflection |
| Sound Output: | 1.7 watts (at 10% harmonic distortion), Max. 2.1 watts |
| Speaker: | 80 mm round |
| Aux. Terminal: | Headphone Jack, 21 pin socket, 6 pin AV socket (DIN) |
| Cabinet: | Table type |
| Dimension: | Height 342 cm Width 370 cm Depth 382 cm |
| Weight (Net): | 12.0 kg |

Specifications are subject to change without notice.

SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION," "SAFETY PRECAUTION" AND THE "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

X-RAY RADIATION PRECAUTION

1. The E.H.T. must be checked every time the receiver is serviced to ensure that the C.R.T. does not emit X-ray radiation as result of excessive E.H.T. voltage. The nominal E.H.T. for this receiver is 25.0 kV at zero beam current (minimum brightness) operating at 220V a.c. The maximum E.H.T. voltage permissible in any operating circumstances must not exceed 26.5 kV. When checking the E.H.T., use the 'High Voltage Check' procedure on page 5 in this manual using an accurate E.H.T. voltmeter.
2. The only source of X-RAY radiation in this receiver is the C.R.T. To prevent X-ray radiation, the replacement C.R.T. must be identical to the original fitted as specified in the Parts List.
3. Some components used in this receiver have safety related characteristics preventing the C.R.T. from emitting X-ray radiation. For continued safety, replacement component should only be made after referring the Product Safety Notice below.

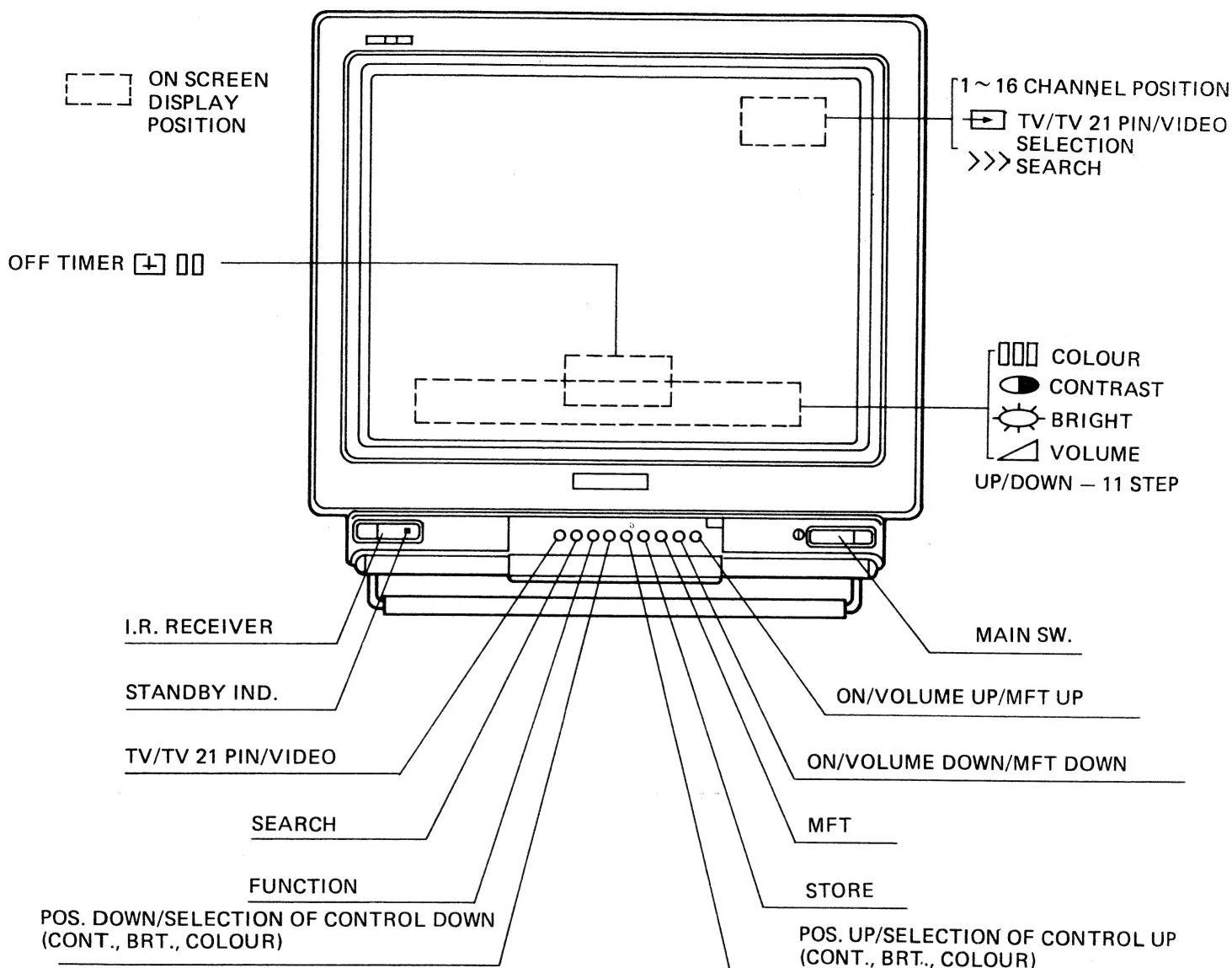
SAFETY PRECAUTION

1. This receiver has a nominal working E.H.T. voltage of 23 kV. Extreme caution should be exercised when working on the receiver with the back removed.
Do not attempt to service this receiver if you are not conversant with the precautions and procedures for working on high voltage equipment. When handling or working on the C.R.T., always discharge the anode to the receiver chassis before removing the anode cap.
The C.R.T., if broken, will violently expel glass fragments and handling faulty or new C.R.T.'s should be carried out with extreme care.
Do not hold the C.R.T. by the neck as this is a very dangerous practice.
2. A small part of the chassis used in this receiver is, when operating, at approximately half mains potential at all times. It is therefore essential in the interest of safety that when serving or connecting any test equipment the receiver should be supplied via a suitable isolating transformer of adequate rating.
3. Replace blown fuses within the receiver with the fuse specified in the parts list.
4. When replacing wires or components to terminals or tags, wind the leads around the terminal before soldering. When replacing safety components identified by the international hazard symbols on the circuit diagram and parts list, it must be a Toshiba approved type and must be mounted as the original.
5. Keep wires away from high temperature components.

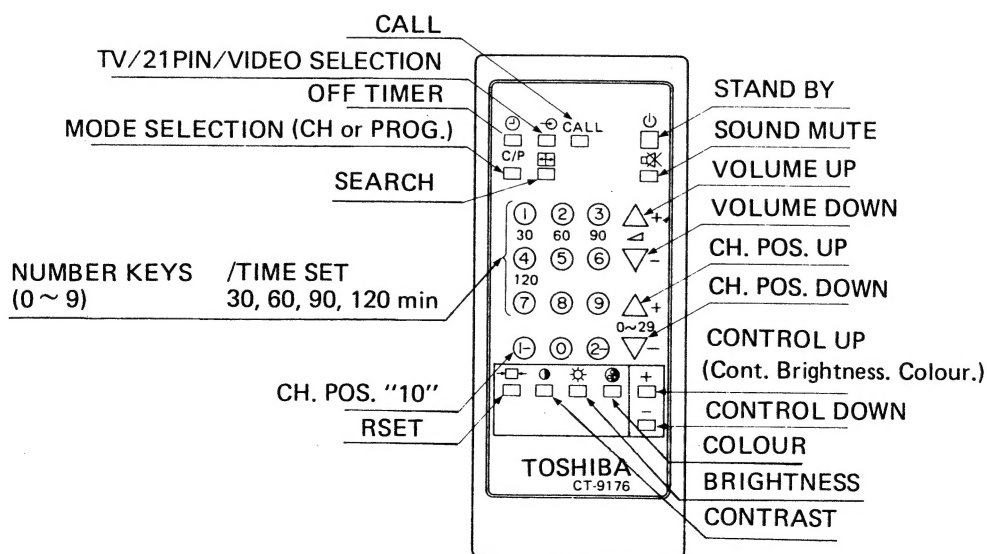
PRODUCT SAFETY NOTICE

Many electrical and mechanical components in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the X-ray radiation protection afforded them cannot necessarily be obtained by using replacements rated at higher voltages or wattage, etc. Components which have these special safety characteristics in this manual and its supplements are identified by the international hazard symbols on the schematic diagram and parts list. Before replacing any of these components read the parts list in this manual carefully. Substitute replacement components which do not have the same safety characteristics as specified in the parts list may create X-ray radiation.

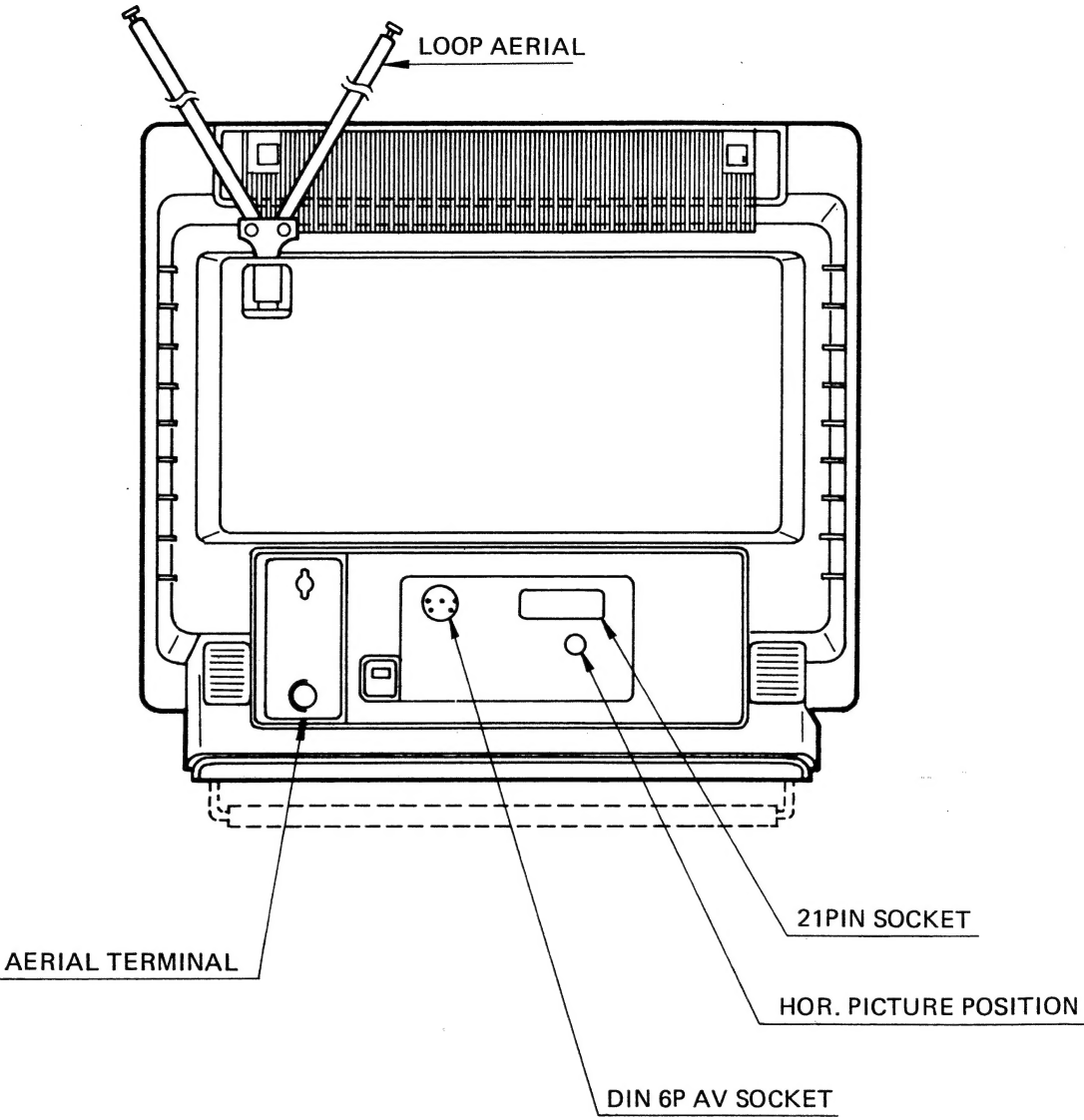
FRONT CONTROLS VIEW



REMOTE HAND HELD UNIT



REAR VIEW



WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION," "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

INSTALLATION AND SERVICE ADJUSTMENTS

GENERAL INFORMATION

All adjustments are thoroughly checked and corrected when the receiver leaves the factory. Therefore the receiver should operate normally and produce proper colour and B/W pictures upon installation. However, several minor adjustments may be required depending on the particular location in which the receiver is operated.

This receiver is shipped completely in cardboard carton. Carefully draw out the receiver from the carton and remove all packing materials.

Plug the power cord into a convenient 220 volts 50Hz AC two pin power outlet.

Turn the receiver ON.

Check and adjust all the customer controls such as BRIGHTNESS, CONTRAST and COLOUR Controls to obtain natural colour or B/W picture.

AUTOMATIC DEGAUSSING

A degaussing coil is mounted around the picture tube so that external degaussing after moving the receiver is normally unnecessary, providing the receiver is properly degaussed upon installation. The degaussing coil operates for about 1 second after Mains switch is switched ON. If the set is moved or faced in a different direction, the Mains switch must be switched off at least 10 minutes in order that the automatic degaussing circuit operates properly.

Should the chassis or parts of the cabinet become magnetized to cause poor colour purity, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube, the sides and front of the receiver and slowly withdraw the coil to a distance of about 2 m before disconnecting it from AC source. If colour shading still persists, perform the COLOUR PURITY ADJUSTMENT and CONVERGENCE ADJUSTMENTS procedures, as mentioned later.

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis.

1. Connect an accurate high voltage meter to the second anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST Controls to minimum (zero beam current).
3. High voltage will be measured below 26.5kV.
4. Rotate the BRIGHTNESS Control to both extremes to be sure the high voltage does not exceed the limit of 26.5kV under any conditions.

HORIZONTAL OSCILLATOR ADJUSTMENT

If there is an indication of unstable horizontal sync., adjust the HORIZONTAL HOLD Control (R451) to remove the condition. Adjust the HORIZONTAL HOLD to the centre of the pull-in range.

VERTICAL OSCILLATOR ADJUSTMENT

If the picture moves up or down on the screen, adjust the VERTICAL HOLD Control (R351) until there is a single image without vertical movement.

HEIGHT ADJUSTMENT

HEIGHT Control (R352) on MAIN Board changes the size of the picture or pattern, having an equal effect on the top and bottom. Make final adjustment to overscan the mask 2 cm at top and bottom.

FOCUS ADJUSTMENT

Adjust FOCUS Control on FLYBACK TRANS. (T461) for well defined scanning lines in the centre area on the screen.

DELAYED R-F AGC ADJUSTMENT

1. Tune the set in the strongest station in your area.
2. Turn AGC DELAY Control (R151) on MAIN Board to fully counterclockwise position.
3. Adjust AGC DELAY Control clockwise until noise (snow) is reduced to minimum on the picture.

BELL COIL (LM51) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the synchroscope to the terminal TPM-01.
3. Adjust LM51 for the flat level of amplitude in each colour bar waveform on the scope. (See figure 1.)

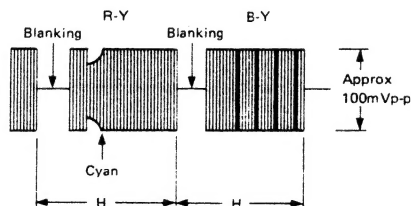


Figure 1.

IDENT COIL (LM52) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the DC voltmeter (Digital Voltmeter) to the pin 26 of ICM01.
3. Adjust LM52 for the maximum indication (approx. DC10V) on the meter.

B-Y, R-Y DEMODE COIL (LM53, LM54) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the synchroscope to the pin 22 of ICM01.
3. Adjust LM53 so that the white level in picture part reaches to the vertical retrace line. (See figure 2.)
4. Then change the connection of synchroscope from the pin 22 to the pin 18 of ICM01.
5. Adjust LM54 so that the white level in picture part reaches to the vertical retrace line. (See figure 3.)

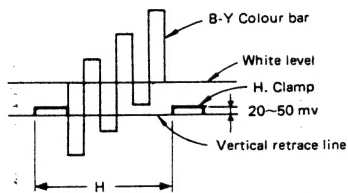


Figure 2.

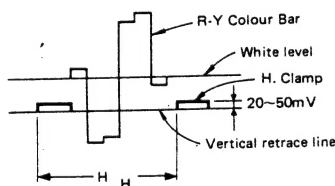


Figure 3.

COLOUR SYNC. ADJUSTMENT

1. Tune in a colour programme (preferably colour bar signal) and warm up for five minutes.
2. Short circuit C512 on Main Board with a short jumper wire.
3. Connect pin 12 of IC501 to +12V line via a 10k ohm resistor, this will disable the colour killer.
4. Then the colour stripes appear on the screen when the adjustment is incorrect. Adjust the colour sync. VR (R552) so that the colour bar pattern stands still or drifts slowly across the picture screen.
5. Remove the 10k ohm resistor and jumper wire.

PAL MATRIX ADJUSTMENT

1. Tune in the colour programme including the colour bar signals.
2. Set the COLOUR Control VR to obtain the proper colour.
3. If the PAL MATRIX adjustment is incorrect, the Venetian Blind effect would appear in the colour bars area. This case needs the adjustment.
4. At the first, adjust DL PHASE ADJ. Coil (L551) to minimize the Venetian Blind effect.

5. Next, connect the terminal TP-43 to the earth with a capacitor (30pF to 50pF). If the Venetian Blind increases, adjust 1H AMP ADJ. VR (R551) to minimize the Blind.
6. Remove the capacitor, and if the Venetian Blind still remains, adjust DL PHASE ADJ. Coil (L551) to minimize the Blind again.
7. Repeat the item 5 and 6 procedures to adjust the R551 and L551 until the Blind does not appear when the capacitor is connected.

CRT GREY SCALE ADJUSTMENT

1. Tune in an active channel.
2. Set the COLOUR Control to minimum.
3. Set the mode SW. SA09 in the "TV" position.
4. Turn the SCREEN Control (on T461) fully counter-clockwise.
5. By rotating the RED, GREEN and BLUE CUT OFF Controls (R557, R558, R559) clockwise from the minimum, set them to the mid position.
6. Set the GREEN and BLUE DRIVE Controls (R252, R253) to the mid position.
7. Remove the 2 pin jumper plug (MV12) on AV Board to connect it to the socket PV14.
8. Rotate the SCREEN Control gradually clockwise until the first horizontal line of a colour (RED, GREEN or BLUE) appears slightly on the screen. Set the SCREEN Control to this position. At the base of the colour, rotate the remaining two CUT OFF Controls gradually clockwise until the horizontal lines of each colour appear slightly on the screen. Adjust the CUT OFF Controls to obtain the slightly lighted (RED, GREEN and BLUE). The lines may look like white if the CUT OFF Controls are adjusted properly.
10. Rotate the BRIGHTNESS and CONTRAST Controls to the maximum.
11. Adjust the BLUE and GREEN DRIVE Controls (R252/R253) to obtain proper white-balanced picture in high light areas.
12. Rotate the BRIGHTNESS and CONTRAST Controls to obtain dark grey raster. Then check the white balance in low brightness. If the white balance is not proper, retouch the CUT OFF Controls and DRIVE Controls to obtain a good white balance in both low and high light areas.

SUB-BRIGHTNESS ADJUSTMENT

1. The Tune in a colour programme.
2. Set the CONTRAST Control to the maximum and the BRIGHTNESS Control to the centre (click-position).
3. Set the COLOUR Control to the centre.
4. Set the SUB-BRIGHT. Control (R255) to the centre and leave the receiver for five minutes in this state.
5. Watching the picture well, adjust the SUB-BRIGHT. Control in the position where the picture does not show evidence of blooming in high bright area and not appear too dark in low bright portion.
6. Check the proper picture variation by rotating the CONTRAST and BRIGHTNESS Controls to both extremes.
7. If the picture does not appear dark with the CONTRAST and BRIGHTNESS Controls turned to the minimum, or not appear bright with the Controls turned to the maximum, adjust the SUB-BRIGHT. Control again for the acceptable picture.

COLOUR PURITY AND CONVERGENCE ADJUSTMENT

It should be remembered that the purity magnet and Deflection Yoke form part of the integrated tube components' assembly.

As these were aligned and fixed during manufacture, it is advisable that the sealing compound should not be broken and the replacement of the whole picture tube with neck components should be taken for servicing.

However the typical procedure for some model is described as follows only for reference.

Note: Before attempting any purity and/or convergence adjustments, the receiver should be operated for at least fifteen minutes.

COLOUR PURITY ADJUSTMENT

1. Demagnetize the picture tube and cabinet using a degaussing coil.
2. Turn the CONTRAST and BRIGHTNESS Controls to maximum.
3. Adjust RED and BLUE CUT OFF controls (R557 and R559) to provide only a green raster. Advance the GREEN CUT OFF Control (R558) if necessary.
4. Loosen the clamp screw holding the yoke, and slide the yoke backward or forward to provide vertical green belt (zone) in the picture screen.
5. Remove the Rubber Wedges
6. Rotate and spread the tabs of the purity magnet (See figure 6) around the neck of the picture tube until a green belt is obtained in the centre of the screen. And at the same time, centre the raster vertically by adjusting the magnet.
7. Move the yoke slowly forward or backward until a uniform green screen is obtained. Tighten the clamp screw.
8. Check the purity of the red and blue raster by adjusting the CUT OFF Controls.
9. Tighten the clamp screw of the yoke temporarily.
10. Obtain a white raster, referring to "CRT GREY SCALE ADJUSTMENT".
11. Proceed with convergence adjustment.

CONVERGENCE ADJUSTMENTS

Centre Convergence Adjustment

1. Receive crosshatch pattern with a colour bar signal generator.
2. Adjust the BRIGHTNESS and CONTRAST Controls for well defined pattern.
3. Adjust two tabs of the 4-Pole Magnets to change the angle between them (See figure 5.) and superimpose red and blue vertical lines in the centre area of the picture screen. (See figure 6.)
4. Turn the both tabs at the same time keeping the constant angle to superimpose red and blue horizontal lines at the centre of the screen. (See figure 3.)
5. Adjust two tabs of 6-Pole Magnets to superimpose red/blue line and green one. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
6. Repeat adjustments 3, 4, 5 with understanding red, green and blue movement, because 4-Pole Magnets and 6-Pole Magnets have mutual affection and it makes dots movement complex.

Circumference Convergence Adjustment

1. Loosen the clamping screw of deflection yoke to allow the yoke to tilt.
2. Put a wedge as shown in figure 4 temporarily. (Do not remove cover paper on adhesive part of the wedge.)
3. Tilt front of the deflection yoke up or down to obtain better convergence in circumference. (See figure 6.) Push the mounted wedge into the space between picture tube and the yoke to fix the yoke temporarily.
4. Put other wedge into bottom space and remove the cover paper to stick.
5. Tilt front of the yoke right or left to obtain better convergence in circumference. (See figure 6.).
6. Keep the yoke position and put another wedge in either upper space. Remove cover paper and stick the wedge on picture tube to fix the yoke.
7. Detach the temporarily mounted wedge and put it in another upper space. Stick it on picture tube to fix the yoke.
8. After fixing three wedges, recheck overall convergence. Tighten the screw firmly to fix the yoke and check the yoke is firm.

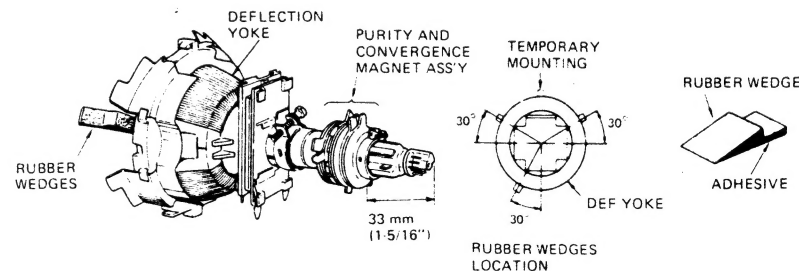
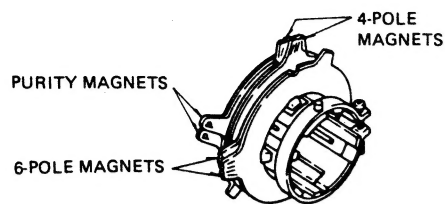
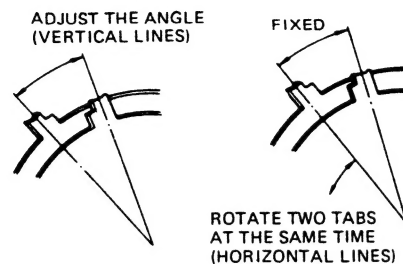


Figure 4.

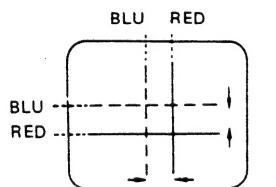


CONVERGENCE MAGNET ASSEMBLY

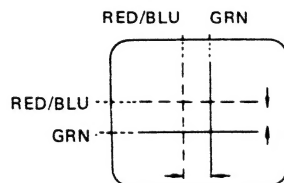


ADJUSTMENT OF MAGNETS

Figure 5.

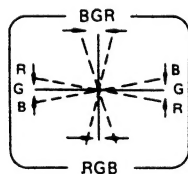


4-POLE MAGNETS MOVEMENT

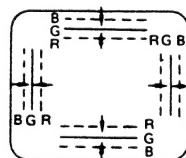


6-POLE MAGNETS MOVEMENT

Center Convergence by Convergence Magnets



INCLINE THE YOKE UP (OR DOWN)



INCLINE THE YOKE RIGHT (OR LEFT)

Circumference Convergence by DEF Yoke

Figure 6. Dot Movement Pattern

GENERAL ALIGNMENT INSTRUCTIONS

1 GENERAL

The alignment procedures described below should only be used when absolutely necessary. The test equipment, alignment procedures and bias values specified must be used to ensure the correct operation of the television receiver.

2 EQUIPMENT TERMINATION

The alignment pads and probes have been designed to give optimum results when used with the specified test equipment. Incorrect matching will produce distorted waveforms or voltages making accurate alignment impossible. To avoid stray pick-up, when constructing pads and probes, keep any unshielded leads below 2.5 cm in length.

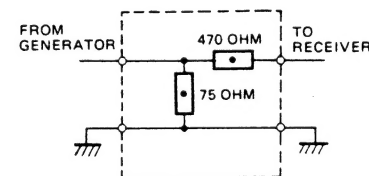
3 SIGNAL OVERLOADING

When using the sweep generator, keep the output as low as possible to avoid overloading. To check for this condition, turn the sweep generator output to minimum and then gradually increase the level until a response is obtained. If the level is then increased further, it should only change the amplitude and not the configuration of the response. If the response begins to flatter at the top or to drop below the base line, decrease the sweep generator output to restore the correct configuration of the response.

The oscilloscope gain should be as high as possible to maintain a usable pattern with the peak to peak values stated. This procedure will allow the sweep generator output to be kept low and thus avoid overloading. If 'markers' from a marker generator are inserted, the response should not be distorted.

4 TEST EQUIPMENT REQUIRED

1. Wide Band Oscilloscope
2. Colour Bar/Dot/Crosshatch Generator
3. TV Sweep and Marker Generator
4. High Impedance Voltmeter or DVM (Digital Volt Meter)
5. Multimeter
6. AGC Bias Supply (12V, 300 mA)
7. Direct Low Capacitance Probe
8. Matching Pad (See the figure below.)
9. External Degaussing Coil
10. Microscope, 10 or 12 times magnification (approximately), to allow observation of the dot structure of the C.R.T.



Matching Pad

PICTURE I-F SWEEP ALIGNMENT

- GENERAL Refer to Figure 7 for test equipment connection.
- PRELIMINARY STEPS 1. Disconnect the solder link SL-1 (ⓐ see Figure 7) on the foil side of the Main Board.
2. Supply -12 volts to the Main Board.
3. Supply adjustable bias to terminal "TP-14" on the Main Board.
4. Turn AGC DELAY Control (R151) on the Main Board fully clockwise.
- SWEEP/MARKER GENERATOR Connect to the point ⓐ as shown in Figure 7 on the Main Board.
- OSCILLOSCOPE Connect with detector probe to terminal TP-12 on the Main Board through 100k ohm resistor.

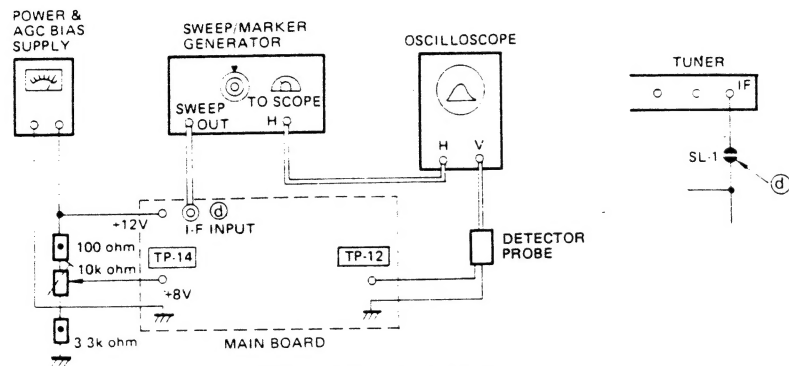


Figure 7. Picture I-F Sweep Alignment

| STEP | SWEEP/MARKER GENERATOR | ADJUST | REMARKS |
|--|------------------------|--------|--|
| L103 ALIGNMENT Set Oscilloscope gain for 0.1 v/cm. Adjust sweep output for easy alignment. (See Figure 8.) | | | |
| Detector Coil (L103) | 38.9MHz Marker "ON" | L103 | <ul style="list-style-type: none"> Connect a capacitor 10μF to pin 25 of IC101 and ground for adjustment. Set the bias voltage so that the response becomes stable. (The bias must be under 8.6V.) Adjust L103 so that the reference OSC frequency moves just on the marker frequency (39.5 MHz) with the zero-beat response. See Figure 8. |
| After completing the above steps, disconnect the equipment and re-solder the solder links. Switch on the receiver, and adjust the AGC Delay control (R151) following DELAYED R-F AGC ADJUSTMENTS. | | | |

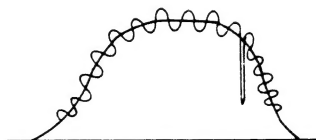
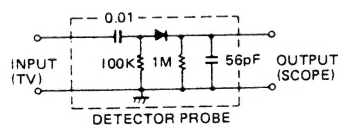


Figure 8. Adjusted Response with Zero-Beat

AFC ALIGNMENT

- GENERAL Refer to Figure 6 for test equipment connection.
- PRELIMINARY STEPS 1. Disconnect the solder link SL-1, SL-3 (ⓐ see Figure 7 and 9) on the foil side of the Main Board.
2. Supply -12 volts to the Main Board.
3. Turn AGC DELAY Control (R151) on the Main Board fully clockwise.
- DVM Connect direct probe to pin 16 of IC101 and ground.

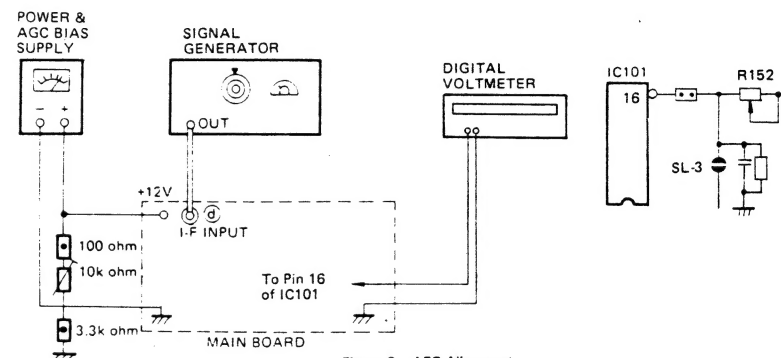


Figure 9. AFC Alignment

| STEP | SIGNAL GENERATOR | ADJUST | REMARKS |
|--|-----------------------|--------|---|
| 1. AFC Balance | NO SIGNAL | R152 | <ul style="list-style-type: none"> Short the pin 6 of IC101 to ground Adjust R152 for 4.3V at pin 16 of IC101. |
| 2. AFC Detector | 38.9 MHz CARRIER WAVE | L171 | <ul style="list-style-type: none"> Connect IF carrier wave (60 dBμ or more) to the point ⓐ in Figure 7. Adjust L171 for 4.3V at pin 16 of IC101. |
| After completing the above steps, disconnect the equipment and re-solder the solder links. Check AFC operation is normal. Readjust AGC DELAY control (R151) following DELAYED R-F AGC ADJUSTMENTS. | | | |

INFRARED SENSOR AMP ALIGNMENT

TUNING FREQUENCY ADJUSTMENT

When LK01 CK01 is replaced, readjustment is required. During adjustment, keep the **VOLUME DOWN** Button on the remote control hand unit pressed.

1. Turn the TV set on.
2. Connect an oscilloscope across CK01. (See figure 10.).
3. Adjust LK01 for the maximum amplitude of waveform (See figure 11) while holding down **VOLUME DOWN** Button on the hand unit.

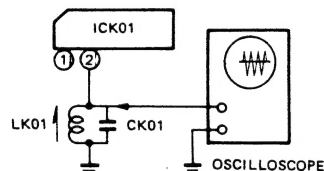


Figure 10. Equipment Connections

4. Rotate the core of LK01 for the maximum amplitude of waveform on the scope, clockwise from the fully counterclockwise position. (See figure 11.)
Note: While adjustment, face the remote hand unit to such direction as to keep 1 Vp-p amplitude of waveform to prevent the saturation of response.
5. After completing adjustment, check the effective distance of the hand unit for approx. 5 meters or more.

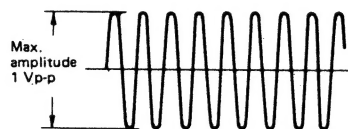


Figure 11. Waveform

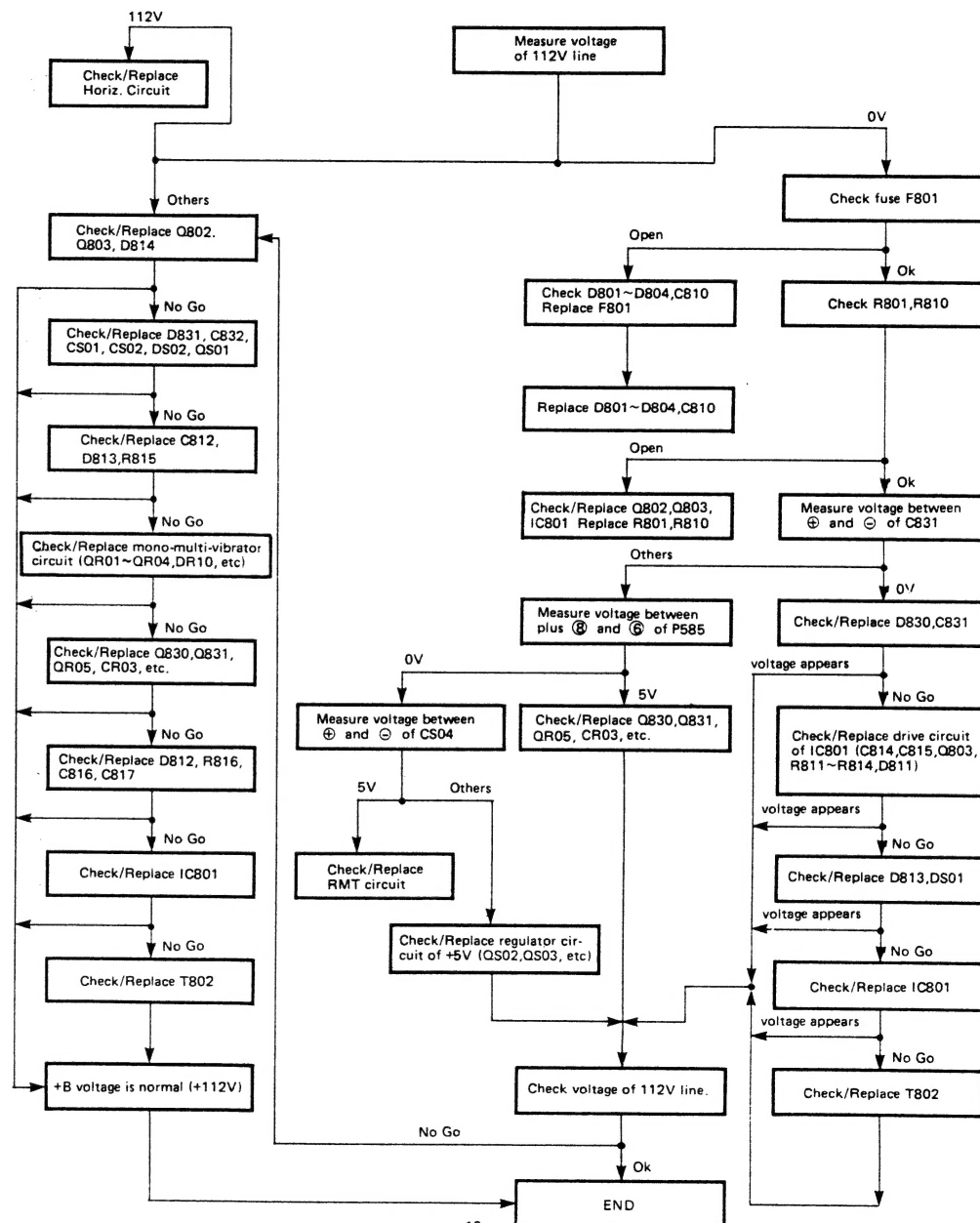
TROUBLESHOOTING CHARTS

The following charts are devoted to troubleshooting which, if followed carefully, will assist you in tracking down a fault to the correct stage.

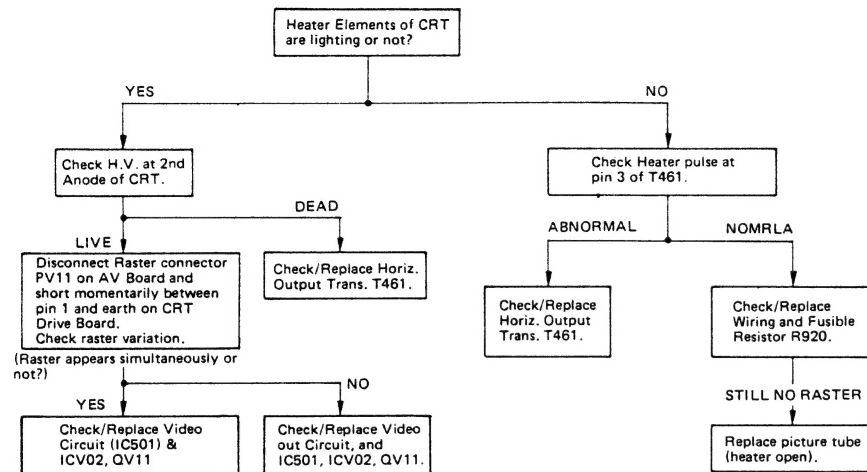
In order to utilize the charts (fault trees), firstly establish the complaint, i.e. — No Raster, No Sound.

Locate the chart applicable and then progress through the various alternatives until a final block indicates the offending components or stage.

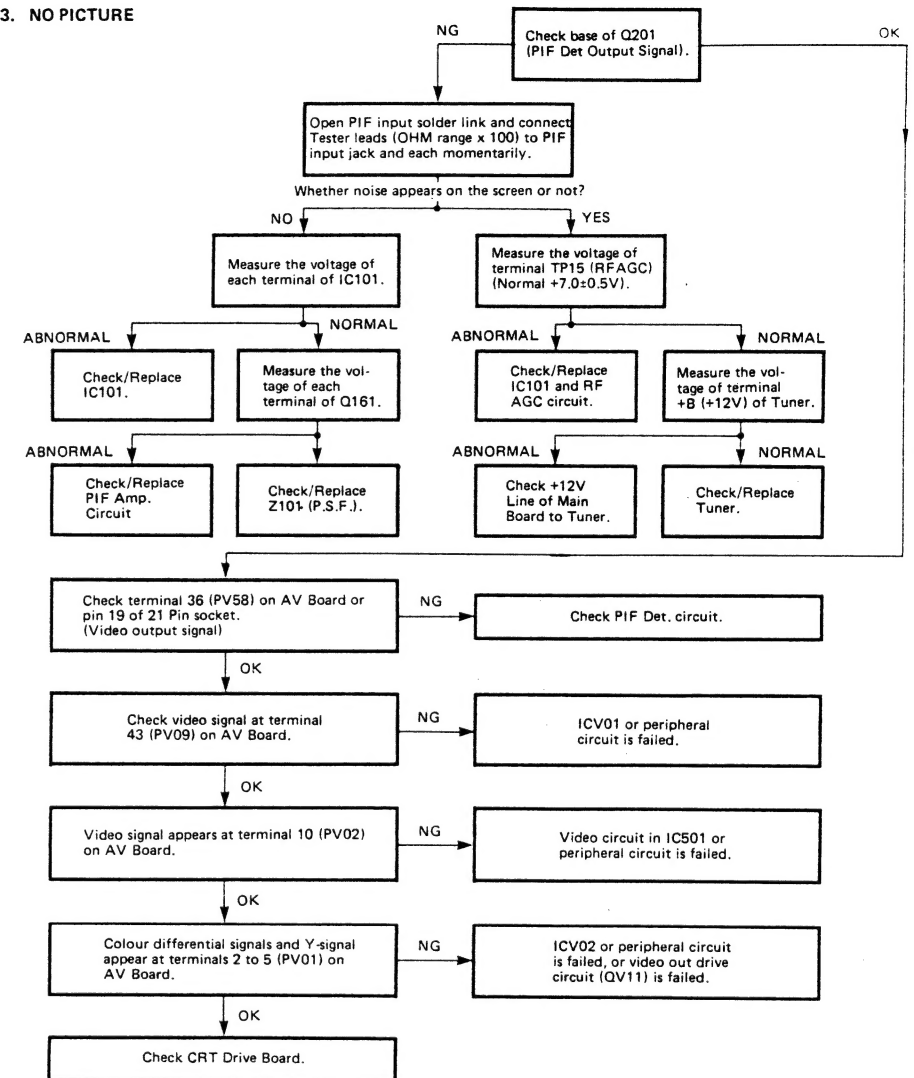
1. NO RASTER AND NO SOUND



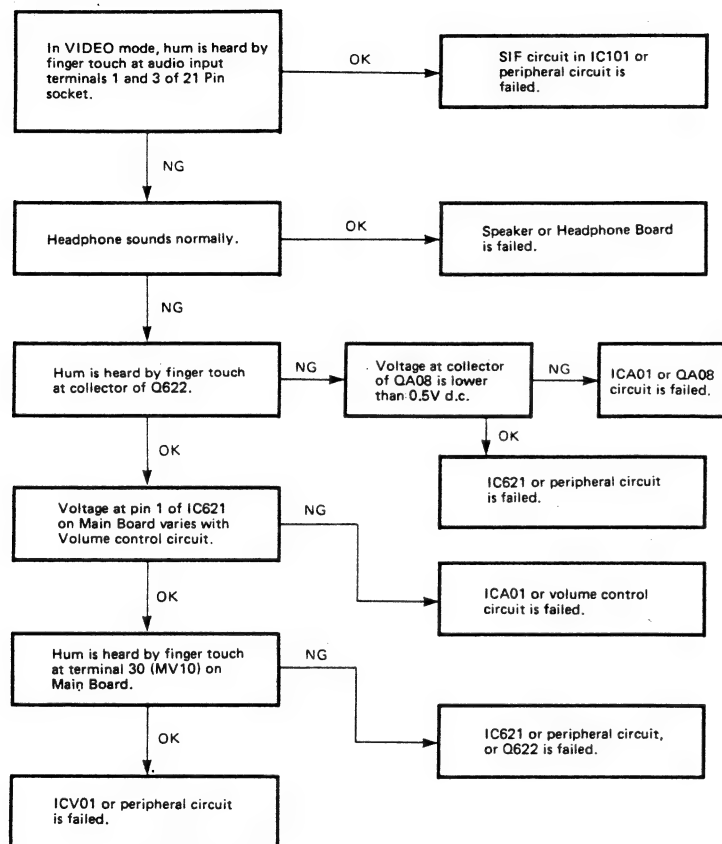
2. NO RASTER (SOUND OK)



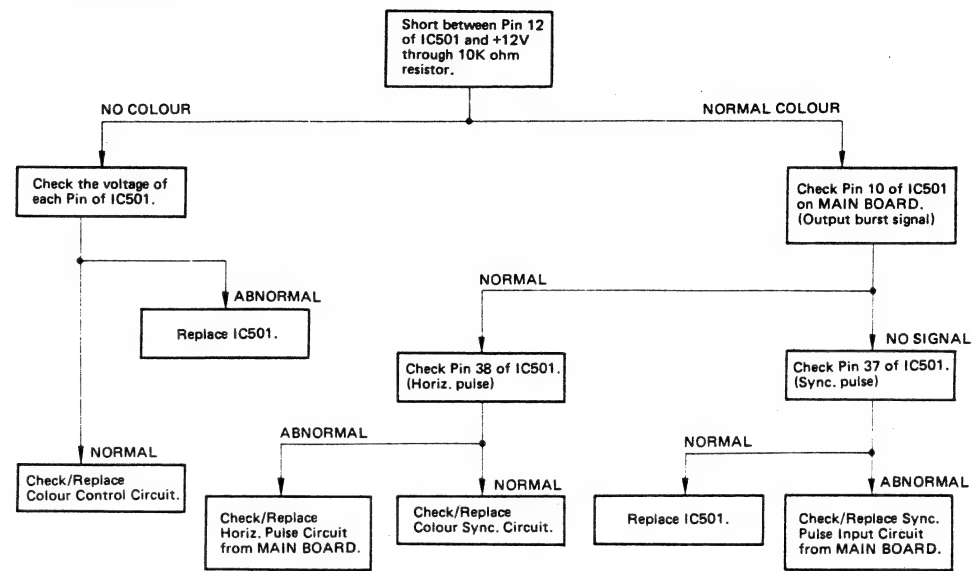
3. NO PICTURE



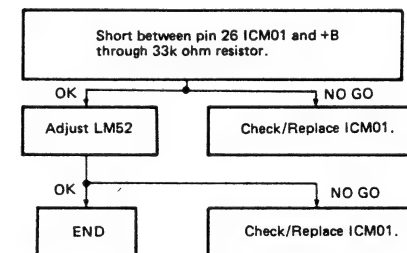
4. NO SOUND



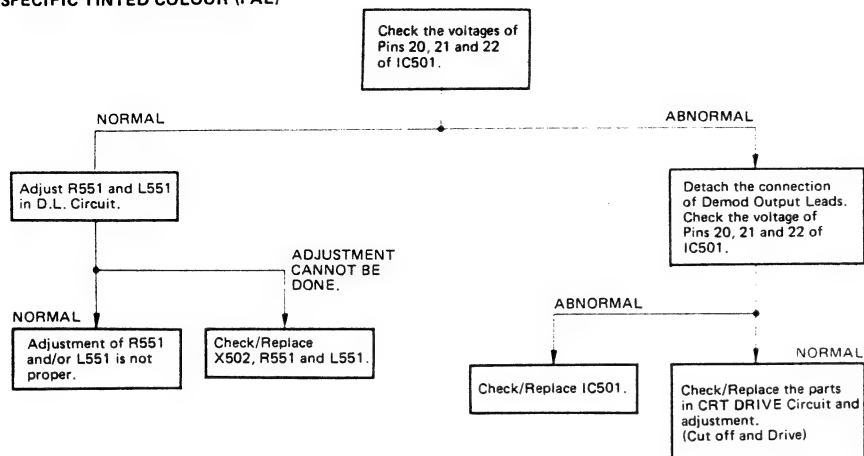
5. NO COLOUR (PAL)



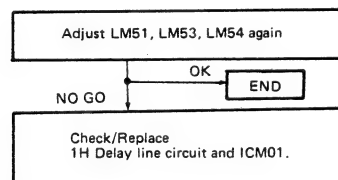
NO COLOUR (SECAM)



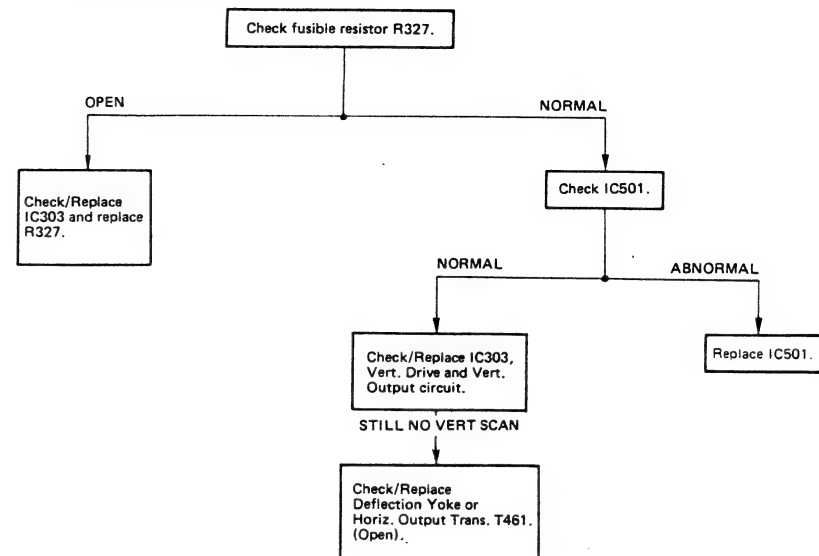
6. SPECIFIC TINTED COLOUR (PAL)



• SPECIFIC TINTED COLOUR (SECAM)



7. NO VERT. SCAN (ONE HORIZ. LINE RASTER)



8. OUT OF VERT. SYNC. AND HORIZ. SYNC.

Check/Replace Sync. Circuit from pin 40 of IC501 to pin 37 or IC501.

9. OUT OF VERT. SYNC.

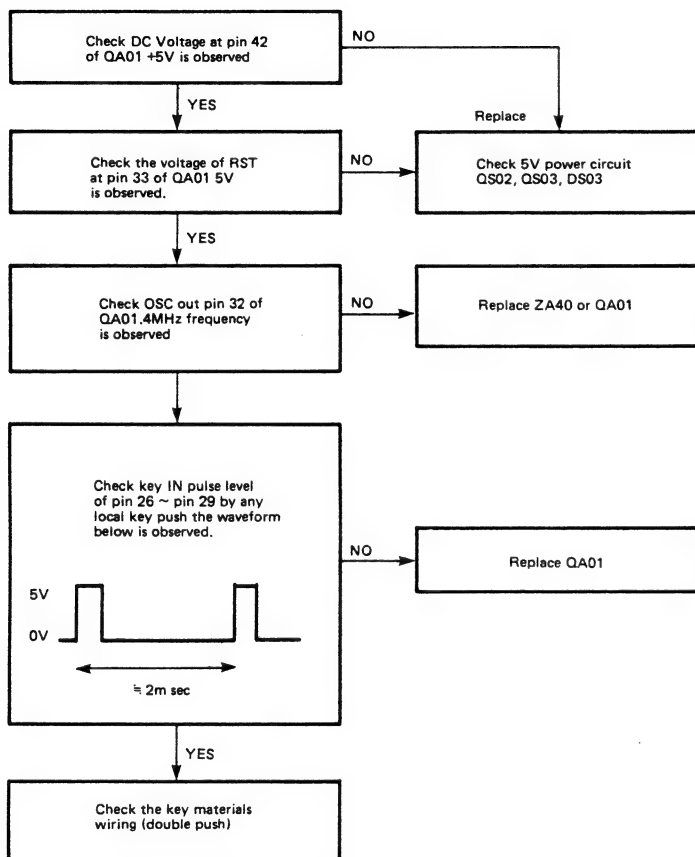
Check/Replace Vert. OSC Circuit and Vert. Hold Circuit connected to Pins 26, 27 and 29 or IC501. Check/Replace IC501.

10. OUT OF HORIZ. SYNC.

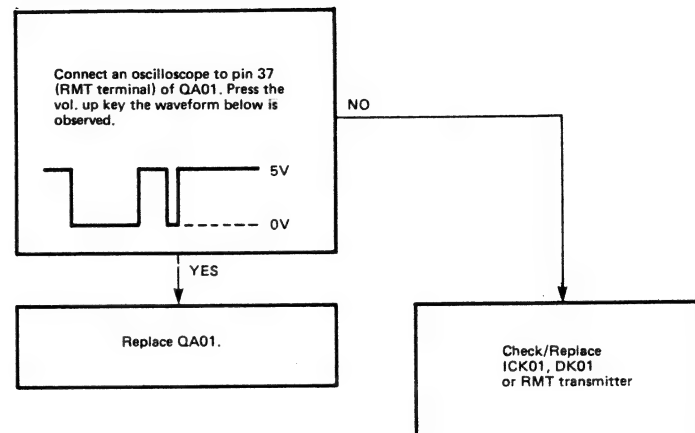
Check/Replace Horiz. OSC Circuit, Horiz. Hold and Horiz. AFC Circuit connected to Pins 23 and 34 of IC501. Check/Replace IC501.

11. CHANNEL SELECTOR TROUBLE

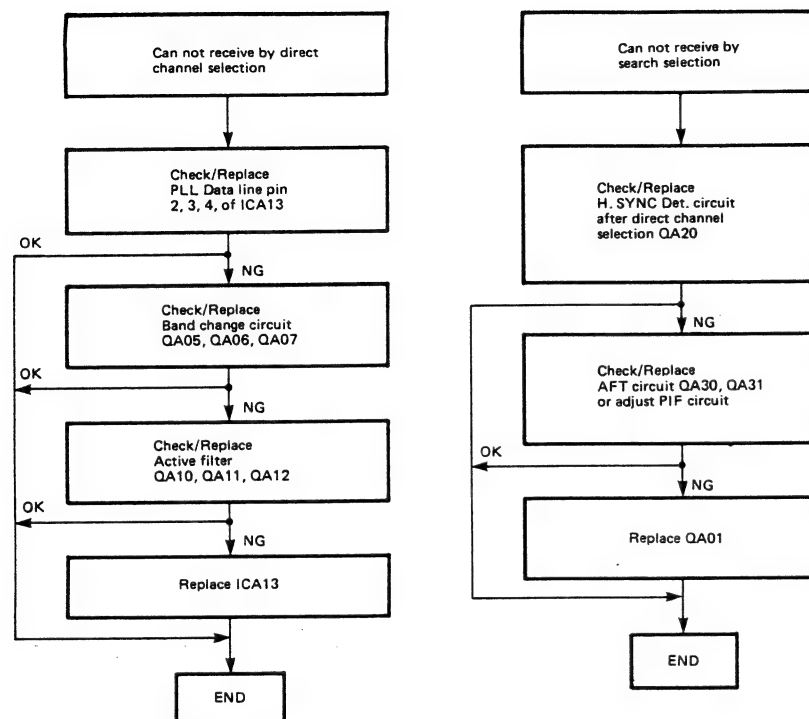
(1) Can not be controlled by any local and any RMT key.



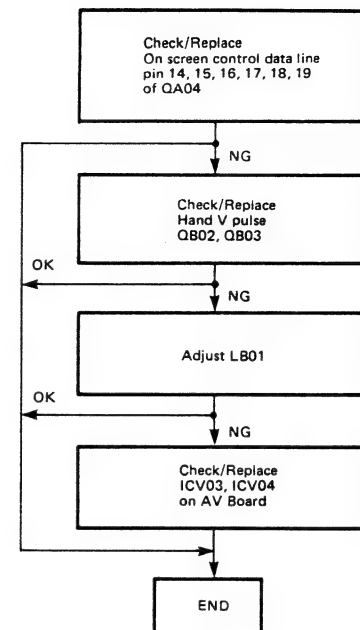
(2) Can not be controlled by any RMT key.



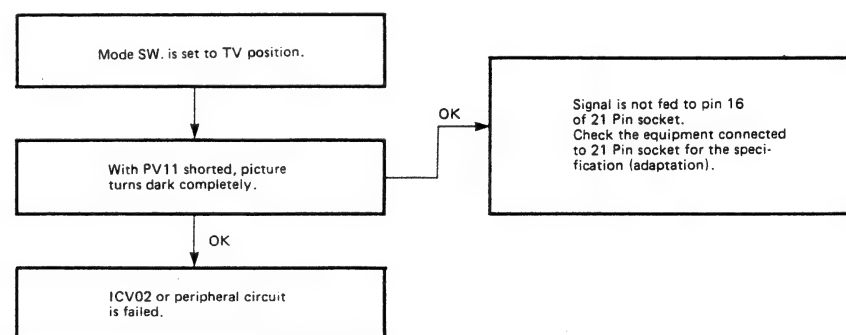
(4) Multifunction of tuning



(5) No on screen display



12. 21PIN/TROUBLE



CABINET REPLACEMENT PART LIST



| Location No. | Part No. | Description |
|--------------|----------|---------------------------|
| A201S | 23807115 | Front Cover |
| A205 | 23805625 | Stand Assembly(LEG) |
| A218 | 23846422 | Piece(B) |
| A231 | 23999826 | Door |
| A232 | 70368125 | Puch Catch |
| A401 | 23990052 | Back Cover |
| A411 | 23992073 | Label, Model Number B/C |
| A413 | 23805614 | LEG(Rubber) |
| A431 | 23990052 | Back Cover, Proper |
| A603 | 23874277 | Knob, POWER |
| A701 | 23924413 | Case |
| A702 | 23934807 | Packing, Bottom |
| A703 | 23934808 | Packing, Top |
| A710 | 23992052 | Label, Model Number |
| B102 | 23848053 | Holder, Back Terminal |
| K902 | 23120713 | Remote Hand Unit, CT-9176 |
| Y001 | 23994239 | Owner's Manual |
| Y125 | 23124935 | VHF, Aerial Telescopic |
| Y145 | 23293977 | Adapter, Aerial Matching |

CHASSIS REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

CAUTION: The international hazard symbols in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2. Do not degrade the safety of the receiver through improper servicing.

NOTICE: The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.

Model 150F6D

ABBREVIATIONS:

Capacitors CD: Ceramic Disk, PF: Plastic Film, EL: Electrolytic

Resistors CF: Carbon Film, CC: Carbon Composition, OMF: Oxide Metal Film, VR: Variable Resistor.

MF: Metal Film, FR: Fusible Resistor.

(All CD and PF capacitors are $\pm 5\%$, 50v and all resistors, $\pm 5\%$, 1/6w unless otherwise noted.)

| Location No. | Part No. | Description |
|-------------------|----------|-------------------------------------|
| CAPACITORS | | |
| C101 | 24212102 | CD, 1000pF, $\pm 10\%$ |
| C102 | 24636229 | EL, 2.2 μ F, 50V |
| C103 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C104 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C105 | 24636229 | EL, 2.2 μ F, 50V |
| C106 | 24617994 | EL, 0.47 μ F, $\pm 20\%$, 50V |
| C107 | 24633330 | EL, 33 μ F, 16V |
| C108 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C109 | 24794101 | EL, 100 μ F, 16V |
| C110 | 24794101 | EL, 100 μ F, 16V |
| C115 | 24212102 | CD, 1000pF, $\pm 10\%$ |
| C121 | 24636478 | EL, 0.47 μ F, 50V |
| C130 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C131 | 24633330 | EL, 33 μ F, 16V |
| C132 | 24636010 | EL, 1 μ F, 50V |
| C162 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C163 | 24212102 | CD, 1000pF, $\pm 10\%$ |
| C164 | 24212102 | CD, 1000pF, $\pm 10\%$ |
| C165 | 24356201 | CD, 200pF |
| C170 | 24436120 | CD, 12pF |
| C171 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C201 | 24436220 | CD, 22pF |
| C202 | 24436560 | CD, 56pF |
| C204 | 24636010 | EL, 1 μ F, 50V |
| C207 | 24636100 | EL, 10 μ F, 50V |
| C210 | 24436560 | CD, 56pF |
| C219 | 24633100 | EL, 10 μ F, 16V |
| C230 | 24636100 | EL, 10 μ F, 50V |
| C240 | 24636479 | EL, 4.7 μ F, 50V |
| C242 | 24636010 | EL, 1 μ F, 50V |
| C301 | 24636010 | EL, 1 μ F, 50V |
| C302 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C303 | 24212561 | CD, 560pF, $\pm 10\%$ |
| C304 | 24530102 | PF, 1000pF, $\pm 10\%$, 63V |
| C305 | 24530153 | PF, 0.015 μ F, $\pm 10\%$, 63V |
| C306 | 24538224 | PF, 0.22 μ F |
| C307 | 24212101 | CD, 100pF, $\pm 10\%$ |
| C309 | 24617981 | EL, 2.2 μ F, $\pm 10\%$, 50V |
| C310 | 24636478 | EL, 0.47 μ F, 50V |
| C311 | 24796102 | EL, 1000 μ F, 35V |

| Location No. | Part No. | Description |
|--------------|----------|-----------------------------------|
| C312 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C313 | 24797101 | EL, 100 μ F, 50V |
| C316 | 24795472 | EL, 4700 μ F, 25V |
| C317 | 24617997 | EL, 2.2 μ F, $\pm 10\%$, 50V |
| C318 | 24214332 | CD, 3300pF, $\pm 10\%$, 500V |
| C319 | 24636478 | EL, 0.47 μ F, 50V |
| C320 | 24530104 | PF, 0.1 μ F, $\pm 10\%$, 63V |
| C371 | 24530682 | PF, 6800pF, $\pm 10\%$, 63V |
| C401 | 24593822 | PF, 8200pF |
| C402 | 24636478 | EL, 0.47 μ F, 50V |
| C403 | 24598562 | PF, 5600pF |
| C405 | 24598302 | PF, 3000pF |
| C406 | 24636229 | EL, 2.2 μ F, 50V |
| C407 | 24636229 | EL, 2.2 μ F, 50V |
| C408 | 24635100 | EL, 10 μ F, 35V |
| C409 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C410 | 24212152 | CD, 1500pF, $\pm 10\%$ |
| C416 | 24214271 | CD, 270pF, $\pm 10\%$, 500V |
| C430 | 24591182 | PF, 1800pF |
| △ C440 | 24095894 | PF, 5600pF, $\pm 3\%$, 1600V |
| C441 | 24214221 | CD, 220pF, $\pm 10\%$, 500V |
| C442 | 24095949 | PF, 0.33 μ F, 200V |
| △ C444 | 24442681 | CD, 680pF, $\pm 10\%$, 2kV |
| C445 | 24095903 | PF, 0.056 μ F, 250V |
| C447 | 24644479 | EL, 4.7 μ F, 250V |
| C448 | 24794222 | EL, 2200 μ F, 16V |
| C449 | 24794471 | EL, 470 μ F, 16V |
| C451 | 24640972 | EL, 33 μ F, 160V |
| C463 | 24212222 | CD, 2200pF, $\pm 10\%$ |
| C501 | 24436150 | CD, 15pF |
| C502 | 24436100 | CD, 10pF, ± 0.25 pF |
| C504 | 24636010 | EL, 1 μ F, 50V |
| C505 | 24636100 | EL, 10 μ F, 50V |
| C506 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C507 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C509 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C510 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C511 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C513 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C514 | 24636478 | EL, 0.47 μ F, 50V |
| C515 | 24436270 | CD, 27pF |

| Location No. | Part No. | Description |
|--------------|----------|------------------------------------|
| C516 | 24353330 | CD, 33pF |
| C517 | 24353680 | CD, 68pF |
| C518 | 24636479 | EL, 4.7 μ F, 50V |
| C519 | 24692223 | PF, 0.022 μ F |
| C520 | 24692223 | PF, 0.022 μ F |
| C523 | 24530473 | PF, 0.047 μ F, \pm 10%, 63V |
| C524 | 24436270 | CD, 27pF |
| C527 | 24636100 | EL, 10 μ F, 50V |
| C528 | 24436121 | CD, 120pF |
| C529 | 24436121 | CD, 120pF |
| C531(U901) | 24212471 | CD, 470pF, \pm 10% |
| C531(U902) | 24436220 | CD, 22pF |
| C532 | 24212471 | CD, 470pF, \pm 10% |
| C533 | 24212471 | CD, 470pF, \pm 10% |
| C601 | 24436470 | CD, 47pF |
| C602 | 24436470 | CD, 47pF |
| C603 | 24530224 | PF, 0.22 μ F, \pm 10%, 63V |
| C604 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C605 | 24633330 | EL, 33 μ F, 16V |
| C606 | 24530223 | PF, 0.022 μ F, \pm 10%, 63V |
| C607 | 24353120 | CD, 12pF |
| C628 | 24636229 | EL, 2.2 μ F, 50V |
| C629 | 24530104 | PF, 0.1 μ F, \pm 10%, 63V |
| C630 | 24794101 | EL, 100 μ F, 16V |
| C631 | 24530224 | PF, 0.22 μ F, \pm 10%, 63V |
| C632 | 24636010 | EL, 1 μ F, 50V |
| C633 | 24530332 | PF, 0.033 μ F, \pm 10%, 63V |
| C635 | 24436101 | CD, 100pF |
| C636 | 24795102 | EL, 1000 μ F, 25V |
| C637 | 24795102 | EL, 1000 μ F, 25V |
| C647 | 24636229 | EL, 2.2 μ F, 50V |
| C661 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C662 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C680 | 24212681 | CD, 680pF, \pm 10% |
| C681 | 24212471 | CD, 470pF, \pm 10% |
| C682 | 24636010 | EL, 1 μ F, 50V |
| C683 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| C685 | 24636010 | EL, 1 μ F, 50V |
| △ C801 | 24098999 | PF, 0.1 μ F, \pm 20%, AC250V |
| △ C802 | 24098999 | PF, 0.1 μ F, \pm 20%, AC250V |
| C803 | 24094906 | CD, 4700pF, +80%, -20%, AC250V |
| C804 | 24094906 | CD, 4700pF, +80%, -20%, AC250V |
| C805 | 24094906 | CD, 4700pF, +80%, -20%, AC250V |
| C806 | 24094906 | CD, 4700pF, +80%, -20%, AC250V |
| C810 | 24086949 | EL, 120 μ F, 400V |
| C811 | 24442391 | CD, 390pF, \pm 10%, 2kV |
| C812 | 24641220 | EL, 22 μ F, 100V |
| C813 | 24214331 | CD, 330pF, \pm 10%, 500V |
| C814 | 24636101 | EL, 100 μ F, 50V |
| C815 | 24591223 | PF, 0.022 μ F |
| C816 | 24820103 | PF, 0.01 μ F, 630V |
| C817 | 24442561 | CD, 560pF, \pm 10%, 2kV |
| C818 | 24212681 | CD, 680pF, \pm 10% |
| C823 | 24633101 | EL, 100 μ F, 16V |
| C830 | 24442181 | CD, 180pF, \pm 10%, 2kV |
| C831 | 24086953 | EL, 220 μ F, \pm 20%, 160V |
| △ C832 | 24795102 | EL, 1000 μ F, 25V |
| C881 | 24094656 | CD, 2200pF, \pm 20%, AC400V |
| C882 | 24094656 | CD, 2200pF, \pm 20%, AC400V |
| C901 | 24644010 | EL, 1 μ F, 250V |

| Location No. | Part No. | Description |
|--------------|----------|-----------------------------------|
| C902 | 24095923 | PF, 4700pF, 1600V |
| CA01 | 24636010 | EL, 1 μ F, 50V |
| CA02 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CA11 | 24591103 | PF, 0.01 μ F |
| CA12 | 24538104 | PF, 0.1 μ F |
| CA20 | 24212681 | CD, 680pF, \pm 10% |
| CA21 | 24591152 | PF, 1500pF |
| CA33 | 24538104 | PF, 0.1 μ F |
| CA40 | 24436101 | CD, 100pF |
| CA41 | 24436101 | CD, 100pF |
| CA42 | 24212102 | CD, 1000pF, \pm 10% |
| CA43 | 24436240 | CD, 24pF |
| CA44 | 24436240 | CD, 24pF |
| CA45 | 24212102 | CD, 1000pF, \pm 10% |
| CA46 | 24212102 | CD, 1000pF, \pm 10% |
| CA47 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CA61 | 24636330 | EL, 33 μ F, 50V |
| CA70 | 24636100 | EL, 10 μ F, 50V |
| CA71 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CA72 | 24636100 | EL, 10 μ F, 50V |
| CA80 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CA81 | 24633100 | EL, 10 μ F, 16V |
| CA82 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CA83 | 24633470 | EL, 47pF, 16V |
| CA87 | 24633100 | EL, 10 μ F, 16V |
| CA88 | 24641010 | EL, 1 μ F, 100V |
| CA89 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CB01 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CB02 | 24436101 | CD, 100pF |
| CB03 | 24212102 | CD, 1000pF, \pm 10% |
| CB10 | 24436101 | CD, 100pF |
| CB11 | 24436101 | CD, 100pF |
| CB12 | 24436101 | CD, 100pF |
| CB13 | 24436101 | CD, 100pF |
| CB80 | 24633100 | EL, 10 μ F, 16V |
| CB81 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CH01 | 24206100 | EL, 10 μ F, 50V |
| CH04 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CH05 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CH06 | 24212102 | CD, 1000pF, \pm 10% |
| CH08 | 24212102 | CD, 1000pF, \pm 10% |
| CH11 | 24206229 | EL, 2.2 μ F, 50V |
| CH12 | 24206010 | EL, 1 μ F, 50V |
| CH18 | 24794331 | EL, 330 μ F, 16V |
| CH20 | 24206010 | EL, 1 μ F, 50V |
| CH21 | 24206010 | EL, 1 μ F, 50V |
| CH22 | 24206010 | EL, 1 μ F, 50V |
| CH32 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CH80 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CH81 | 24206100 | EL, 10 μ F, 50V |
| CH83 | 24794331 | EL, 330 μ F, 16V |
| CH90 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CH91 | 24206229 | EL, 2.2 μ F, 50V |
| CH92 | 24206100 | EL, 10 μ F, 50V |
| CH95 | 24794331 | EL, 330 μ F, 16V |
| CK01 | 24501222 | PF, 2200pF |
| CK02 | 24530683 | PF, 0.068 μ F, \pm 10%, 63V |
| CK03 | 24633100 | EL, 10 μ F, 16V |
| CK04 | 24633330 | EL, 33 μ F, 16V |
| CK05 | 24633100 | EL, 10 μ F, 16V |
| CK06 | 24794101 | EL, 100 μ F, 16V |
| CK07 | 24593222 | PF, 2200pF |
| CM01 | 24357220 | CD, 22pF |
| CM07 | 24636010 | EL, 1 μ F, 50V |

| Location No. | Part No. | Description |
|--------------|----------|---|
| CM09 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CM10 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CM11 | 24636478 | EL, 0.47 μ F, 50V |
| CM14 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CM15 | 24636010 | EL, 1 μ F, 50V |
| CM17 | 24636010 | EL, 1 μ F, 50V |
| CM19 | 24636010 | EL, 1 μ F, 50V |
| CM21 | 24633100 | EL, 10 μ F, 16V |
| CM23 | 24633100 | EL, 10 μ F, 16V |
| CM25 | 24212102 | CD, 1000pF, \pm 10% |
| CM26 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CM27 | 24636010 | EL, 1 μ F, 50V |
| CM28 | 24359390 | CD, 39pF |
| CM29 | 24359680 | CD, 68pF |
| CM31 | 24436331 | CD, 330pF |
| CM32 | 24212102 | CD, 1000pF, \pm 10% |
| CM33 | 24359390 | CD, 39pF |
| CM34 | 24359560 | CD, 56pF |
| CM36 | 24436331 | CD, 330pF |
| CM38 | 24633100 | EL, 10 μ F, 16V |
| CM39 | 24633100 | EL, 10 μ F, 16V |
| CM40 | 24794331 | EL, 330 μ F, 16V |
| CM41 | 24474103 | CD, 0.01 μ F, 16V |
| CM43 | 24474103 | CD, 0.01 μ F, 16V |
| CM44 | 24474103 | CD, 0.01 μ F, 16V |
| CM45 | 24633470 | EL, 47pF, 16V |
| CM46 | 24474151 | CD, 150pF, \pm 10% |
| CM47 | 24474151 | CD, 150pF, \pm 10% |
| CM48 | 24474151 | CD, 150pF, \pm 10% |
| CM62 | 24473470 | CD, 47pF |
| CM63 | 24473470 | CD, 47pF |
| CM64 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CM65 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CM70 | 24357820 | CD, 82pF |
| CM71 | 24212821 | CD, 820pF, \pm 10% |
| CM73 | 24593122 | PF, 1200pF |
| CR01 | 24095877 | PF, 1000pF |
| CR02 | 24436470 | CD, 47pF |
| CR03 | 24633220 | EL, 22 μ F, 16V |
| CS01 | 24798470 | EL, 47 μ F, 100V |
| CS02 | 24636100 | EL, 10 μ F, 50V |
| CS03 | 24633470 | EL, 47 μ F, 16V |
| CS04 | 24633100 | EL, 10 μ F, 16V |
| CS05 | 24214221 | CD, 220pF, \pm 10%, 500V |
| CV01 | 24636010 | EL, 1 μ F, 50V |
| CV02 | 24636010 | EL, 1 μ F, 50V |
| CV03 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CV13 | 24538104 | PF, 0.1 μ F |
| CV14 | 24538104 | PF, 0.1 μ F |
| CV15 | 24538104 | PF, 0.1 μ F |
| CV30 | 24636100 | EL, 10 μ F, 50V |
| CV60 | 24085031 | EL, 1 μ F, \pm 20%, 25V, Non-Polar |
| CV61 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CV70 | 24636010 | EL, 1 μ F, 50V |
| CV71 | 24636010 | EL, 1 μ F, 50V |
| CV72 | 24636010 | EL, 1 μ F, 50V |
| CV73 | 24636010 | EL, 1 μ F, 50V |
| CV74 | 24636010 | EL, 1 μ F, 50V |
| CV75 | 24636010 | EL, 1 μ F, 50V |
| CV80 | 24636100 | EL, 10 μ F, 50V |
| CV81 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CV82 | 24794102 | EL, 1000 μ F, 16V |
| CV83 | 24232103 | CD, 0.01 μ F, +80%, -20% |

| Location No. | Part No. | Description |
|------------------|----------|--------------------------------|
| CV84 | 24633470 | EL, 47pF, 16V |
| CV85 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CV86 | 24636100 | EL, 10 μ F, 50V |
| CV87 | 24633100 | EL, 10 μ F, 16V |
| CV88 | 24232103 | CD, 0.01 μ F, +80%, -20% |
| CV89 | 24636010 | EL, 1 μ F, 50V |
| CZ01 | 24094681 | Capacitor Block, 2200pFx4, 50V |
| RESISTORS | | |
| R101 | 24890122 | CF, 1200 ohm, 1/4W |
| R105 | 24890221 | CF, 220 ohm, 1/4W |
| R107 | 24366824 | CF, 820k ohm |
| R109 | 24366104 | CF, 100k ohm |
| R120 | 24366222 | CF, 2200 ohm |
| R121 | 24366562 | CF, 5600 ohm |
| R122 | 24366362 | CF, 3600 ohm |
| R124 | 24366473 | CF, 47k ohm |
| R125 | 24366430 | CF, 43 ohm |
| R126 | 24366561 | CF, 560 ohm |
| △ R130 | 24382680 | OMF, 68 ohm, 1W |
| R151 | 24066953 | VR, 5k ohm, 1/10W |
| R152 | 24066946 | VR, 1M ohm, 1/10W |
| R161 | 24366820 | CF, 82 ohm |
| R162 | 24366102 | CF, 1k ohm |
| R163 | 24366562 | CF, 5600 ohm |
| R164 | 24366221 | CF, 220 ohm |
| R165 | 24366471 | CF, 470 ohm |
| R166 | 24366270 | CF, 27 ohm |
| R167 | 24366680 | CF, 68 ohm |
| R168 | 24366271 | CF, 270 ohm |
| R171 | 24366334 | CF, 330k ohm |
| R172 | 24366102 | CF, 1k ohm |
| R201 | 24366331 | CF, 330 ohm |
| R202 | 24366102 | CF, 1k ohm |
| R203 | 24366152 | CF, 1500 ohm |
| R204 | 24366152 | CF, 1500 ohm |
| R207 | 24890152 | CF, 1500 ohm, 1/4W |
| R208 | 24366824 | CF, 820k ohm |
| R209 | 24366104 | CF, 100k ohm |
| R210 | 24366152 | CF, 1500 ohm |
| R212 | 24366153 | CF, 15k ohm |
| R213 | 24366103 | CF, 10k ohm |
| R214 | 24366682 | CF, 6800 ohm |
| R216 | 24366103 | CF, 10k ohm |
| R217 | 24366223 | CF, 22k ohm |
| R218 | 24366101 | CF, 100 ohm |
| R220 | 24366152 | CF, 1500 ohm |
| R224 | 24366153 | CF, 15k ohm |
| R225 | 24366103 | CF, 10k ohm |
| R226 | 24366332 | CF, 3300 ohm |
| R227 | 24366102 | CF, 1k ohm |
| R228 | 24890244 | CF, 240k ohm, 1/4W |
| R229 | 24366562 | CF, 5600 ohm |
| R233 | 24366221 | CF, 220 ohm |
| R234 | 24366102 | CF, 1k ohm |
| R235 | 24366332 | CF, 3300 ohm |
| R236 | 24366332 | CF, 3300 ohm |
| R237 | 24366562 | CF, 5600 ohm |
| R238 | 24366103 | CF, 10k ohm |
| R240 | 24366333 | CF, 33k ohm |
| R241 | 24366104 | CF, 100k ohm |
| R242 | 24366474 | CF, 470k ohm |
| R243 | 24366823 | CF, 82k ohm |

| Location No. | Part No. | Description |
|--------------|----------|---------------------------------|
| △ R248 | 24552391 | OMF, 390 ohm, 1/2W |
| R249 | 24890101 | CF, 100 ohm, 1/4W |
| R252 | 24061613 | VR, 200 ohm, 1/10W |
| R253 | 24061613 | VR, 200 ohm, 1/10W |
| R255 | 24061609 | VR, 5k ohm, 1/10W |
| R265 | 24890121 | CF, 120 ohm, 1/4W |
| R301 | 24890561 | CF, 560 ohm, 1/4W |
| R302 | 24366564 | CF, 560k ohm |
| R303 | 24890225 | CF, 2.2M ohm, 1/4W |
| R304 | 24366103 | CF, 10k ohm |
| R306 | 24366681 | CF, 680 ohm |
| R307 | 24366563 | CF, 56k ohm |
| R308 | 24366393 | CF, 39k ohm |
| R309 | 24890224 | CF, 220k ohm, 1/4W |
| R310 | 24946825 | CC, 8.2M ohm, $\pm 10\%$, 1/2W |
| R311 | 24890273 | CF, 27k ohm, 1/4W |
| R315 | 24890223 | CF, 22k ohm, 1/4W |
| R316 | 24366474 | CF, 470k ohm |
| △ R317 | 24552102 | OMF, 1k ohm, 1/2W |
| R319 | 24366182 | CF, 1800 ohm |
| R320 | 24366102 | CF, 1k ohm |
| △ R321 | 24552222 | OMF, 2200 ohm, 1/2W |
| △ R322 | 24009950 | OMF, 750 ohm, 1W |
| △ R323 | 24322129 | OMF, 1.2 ohm, 1W |
| R324 | 24890163 | CF, 16k ohm, 1/4W |
| △ R327 | 24532100 | FR, 10 ohm, 1W |
| △ R331 | 24553202 | OMF, 2k ohm, 1W |
| R333 | 24366331 | CF, 330 ohm |
| △ R340 | 24552122 | OMF, 1200 ohm, 1/2W |
| △ R341 | 24552122 | OMF, 1200 ohm, 1/2W |
| △ R342 | 24552122 | OMF, 1200 ohm, 1/2W |
| R351 | 24066948 | VR, 200k ohm, 1/10W |
| R352 | 24061606 | VR, 50k ohm, 1/10W |
| R381 | 24366272 | CF, 2700 ohm |
| R382 | 24366823 | CF, 82k ohm |
| R401 | 24366431 | CF, 430 ohm |
| R402 | 24890103 | CF, 10k ohm, 1/4W |
| R403 | 24366332 | CF, 3300 ohm |
| R404 | 24366222 | CF, 2200 ohm |
| R405 | 24366333 | CF, 33k ohm |
| R406 | 24366154 | CF, 150k ohm |
| △ R407 | 24552221 | OMF, 220 ohm, 1/2W |
| R408 | 24366182 | CF, 1800 ohm |
| △ R409 | 24552121 | OMF, 120 ohm, 1/2W |
| △ R410 | 24000947 | OMF, 15k ohm, $\pm 2\%$, 1/2W |
| R411 | 24366330 | CF, 33 ohm |
| △ R416 | 24009992 | OMF, 2k ohm, 3W |
| △ R420 | 24009951 | OMF, 1k ohm, 1W |
| △ R421 | 24009951 | OMF, 1k ohm, 1W |
| R430 | 24366682 | CF, 6800 ohm |
| △ R431 | 24552432 | OMF, 4300 ohm, 1/2W |
| △ R440 | 24376103 | CF, 10k ohm, 1/2W |
| △ R441 | 24376103 | CF, 10k ohm, 1/2W |
| △ R444 | 24321109 | OMF, 1 ohm, 1/2W |
| △ R448 | 24547249 | FR, 2.4 ohm, 1W |
| R451 | 24066952 | VR, 10k ohm, 1/10W |
| △ R461 | 24552181 | OMF, 180 ohm, 1/2W |
| R501 | 24890821 | CF, 820 ohm, 1/4W |
| R502 | 24366272 | CF, 2700 ohm |
| R503 | 24890562 | CF, 5600 ohm, 1/4W |
| R504 | 24366334 | CF, 330k ohm |
| R505 | 24366183 | CF, 18k ohm |
| R506 | 24890182 | CF, 1800 ohm, 1/4W |
| R509 | 24366391 | CF, 390 ohm |

| Location No. | Part No. | Description |
|--------------|----------|--------------------------------|
| R510 | 24366471 | CF, 470 ohm |
| R511 | 24366223 | CF, 22k ohm |
| R512 | 24366104 | CF, 100k ohm |
| R513 | 24366103 | CF, 10k ohm |
| R514 | 24366471 | CF, 470 ohm |
| R515 | 24366821 | CF, 820 ohm |
| R516 | 24366221 | CF, 220 ohm |
| R517 | 24366823 | CF, 82k ohm |
| R518 | 24366273 | CF, 27k ohm |
| R519 | 24890273 | CF, 27k ohm, 1/4W |
| R520 | 24366122 | CF, 1200 ohm |
| R522 | 24366272 | CF, 2700 ohm |
| R524 | 24366272 | CF, 2700 ohm |
| R525 | 24366101 | CF, 100 ohm |
| R526 | 24366272 | CF, 2700 ohm |
| R527 | 24366101 | CF, 100 ohm |
| R528 | 24366101 | CF, 100 ohm |
| R529 | 24366101 | CF, 100 ohm |
| △ R533 | 24553433 | OMF, 43k ohm, 1W |
| △ R534 | 24553433 | OMF, 43k ohm, 1W |
| △ R535 | 24553433 | OMF, 43k ohm, 1W |
| R540 | 24890151 | CF, 150 ohm, 1/4W |
| R541 | 24890161 | CF, 160 ohm, 1/4W |
| R542 | 24890161 | CF, 160 ohm, 1/4W |
| R543 | 24890221 | CF, 220 ohm, 1/4W |
| R544 | 24890221 | CF, 220 ohm, 1/4W |
| R545 | 24890221 | CF, 220 ohm, 1/4W |
| R551 | 24066826 | VR, 1k ohm, $\pm 20\%$ |
| R557 | 24061609 | VR, 5k ohm, 1/10W |
| R558 | 24061609 | VR, 5k ohm, 1/10W |
| R559 | 24061609 | VR, 5k ohm, 1/10W |
| R563 | 24366183 | CF, 18k ohm |
| △ R591 | 24009974 | OMF, 15k ohm, 2W |
| △ R592 | 24009974 | OMF, 15k ohm, 2W |
| △ R593 | 24009974 | OMF, 15k ohm, 2W |
| R602 | 24366331 | CF, 330 ohm |
| R605 | 24366183 | CF, 18k ohm |
| R606 | 24366102 | CF, 1k ohm |
| R607 | 24366222 | CF, 2200 ohm |
| R608 | 24366752 | CF, 7500 ohm |
| R609 | 24366471 | CF, 470 ohm |
| R610 | 24366681 | CF, 680 ohm |
| R612 | 24366471 | CF, 470 ohm |
| R617 | 24366682 | CF, 6800 ohm |
| R618 | 24366153 | CF, 15k ohm |
| R619 | 24366222 | CF, 2200 ohm |
| △ R623 | 24321479 | OMF, 4.7 ohm, 1/2W |
| R624 | 24366334 | CF, 330k ohm |
| △ R630 | 24322569 | OMF, 5.6 ohm, 1W |
| R638 | 24366102 | CF, 1k ohm |
| R644 | 24366682 | CF, 6800 ohm |
| R661 | 24946101 | CC, 100 ohm, $\pm 10\%$, 1/2W |
| R680 | 24366104 | CF, 100k ohm |
| R681 | 24366273 | CF, 27k ohm |
| R682 | 24366472 | CF, 4700 ohm |
| R683 | 24366562 | CF, 5600 ohm |
| R684 | 24366301 | CF, 300 ohm |
| R685 | 24366333 | CF, 33k ohm |
| R686 | 24366103 | CF, 10k ohm |
| R687 | 24366183 | CF, 18k ohm |
| R688 | 24366332 | CF, 3300 ohm |
| R692 | 24366104 | CF, 100k ohm |
| △ R801 | 24007688 | Cement, 6.2 ohm, 9W |
| △ R810 | 24000838 | FR, 0.33 ohm, $\pm 10\%$, 2W |

| Location No. | Part No. | Description |
|--------------|----------|----------------------|
| △ R811 | 24377224 | CF, 220k ohm, 1W |
| △ R812 | 24322689 | OMF, 6.8 ohm, 1W |
| △ R813 | 24383470 | OMF, 47 ohm, 2W |
| R814 | 24366681 | CF, 680 ohm |
| △ R815 | 24321479 | OMF, 4.7 ohm, 1/2W |
| △ R816 | 24384683 | OMF, 68k ohm, 3W |
| R818 | 24366561 | CF, 560 ohm |
| R820 | 24360134 | CF, 130k ohm, 1/8W |
| △ R827 | 24321398 | OMF, 0.39 ohm, 1/2W |
| △ R830 | 24321398 | OMF, 0.39 ohm, 1/2W |
| △ R833 | 24009953 | OMF, 10k ohm, 3W |
| R834 | 24366682 | CF, 6800 ohm |
| R835 | 24366102 | CF, 1k ohm |
| △ R890 | 24000816 | PTC Thermistor, Dual |
| R901 | 24946152 | CC, 1500 ohm, ±10% |
| R902 | 24946152 | CC, 1500 ohm, ±10% |
| R903 | 24946152 | CC, 1500 ohm, ±10% |
| △ R920 | 24000885 | FR, 2.7 ohm, 1W |
| △ RA01 | 24383163 | OMF, 16k ohm, 2W |
| RA02 | 24890103 | CF, 10k ohm, 1/4W |
| RA03 | 24366394 | CF, 390k ohm |
| RA04 | 24366333 | CF, 33k ohm |
| RA05 | 24890103 | CF, 10k ohm, 1/4W |
| RA06 | 24366682 | CF, 6800 ohm |
| RA07 | 24366473 | CF, 47k ohm |
| RA08 | 24366682 | CF, 6800 ohm |
| RA09 | 24366473 | CF, 47k ohm |
| RA10 | 24366562 | CF, 5600 ohm |
| RA11 | 24366754 | CF, 750k ohm |
| RA12 | 24366561 | CF, 560 ohm |
| RA13 | 24366132 | CF, 1300 ohm |
| RA14 | 24366151 | CF, 150 ohm |
| RA15 | 24366124 | CF, 120k ohm |
| RA16 | 24366273 | CF, 27k ohm |
| RA17 | 24890101 | CF, 100 ohm, 1/4W |
| RA20 | 24366472 | CF, 4700 ohm |
| RA21 | 24890562 | CF, 5600 ohm, 1/4W |
| RA22 | 24366103 | CF, 10k ohm |
| RA23 | 24890103 | CF, 10k ohm, 1/4W |
| RA30 | 24366224 | CF, 220k ohm |
| RA31 | 24890822 | CF, 8200 ohm, 1/4W |
| RA32 | 24366752 | CF, 7500 ohm |
| RA33 | 24366103 | CF, 10k ohm |
| RA34 | 24366103 | CF, 10k ohm |
| RA35 | 24366103 | CF, 10k ohm |
| RA40 | 24366104 | CF, 100k ohm |
| RA41 | 24890102 | CF, 1k ohm, 1/4W |
| RA42 | 24366562 | CF, 5600 ohm |
| RA43 | 24366562 | CF, 5600 ohm |
| RA44 | 24366562 | CF, 5600 ohm |
| RA45 | 24366820 | CF, 82 ohm |
| RA60 | 24890102 | CF, 1k ohm, 1/4W |
| RA61 | 24890101 | CF, 100 ohm, 1/4W |
| RA62 | 24366102 | CF, 1k ohm |
| RA63 | 24366332 | CF, 3300 ohm |
| RA64 | 24366104 | CF, 100k ohm |
| RA70 | 24366101 | CF, 100 ohm |
| RA71 | 24366224 | CF, 220k ohm |
| RA72 | 24366153 | CF, 15k ohm |
| RA73 | 24366101 | CF, 100 ohm |
| RA74 | 24366102 | CF, 1k ohm |
| RA80 | 24366272 | CF, 2700 ohm |
| RA81 | 24366103 | CF, 10k ohm |
| RA82 | 24366331 | CF, 330 ohm |

| Location No. | Part No. | Description |
|--------------|----------|-----------------------|
| RA83 | 24366102 | CF, 1k ohm |
| RA84 | 24890103 | CF, 10k ohm, 1/4W |
| RA85 | 24890102 | CF, 1k ohm, 1/4W |
| RA86 | 24890102 | CF, 1k ohm, 1/4W |
| RA87 | 24366102 | CF, 1k ohm |
| RA88 | 24366102 | CF, 1k ohm |
| RA89 | 24366562 | CF, 5600 ohm |
| RA90 | 24890102 | CF, 1k ohm, 1/4W |
| RA92 | 24890102 | CF, 1k ohm, 1/4W |
| RA95 | 24890102 | CF, 1k ohm, 1/4W |
| RA96 | 24366102 | CF, 1k ohm |
| RA97 | 24366102 | CF, 1k ohm |
| RA98 | 24366102 | CF, 1k ohm |
| RB01 | 24366103 | CF, 10k ohm |
| RB02 | 24366302 | CF, 3k ohm |
| RB03 | 24366333 | CF, 33k ohm |
| RB05 | 24366103 | CF, 10k ohm |
| RB06 | 24366302 | CF, 3k ohm |
| RB07 | 24366103 | CF, 10k ohm |
| RB10 | 24890102 | CF, 1k ohm, 1/4W |
| RB11 | 24890102 | CF, 1k ohm, 1/4W |
| RB12 | 24366102 | CF, 1k ohm |
| RB13 | 24366102 | CF, 1k ohm |
| RH01 | 24366820 | CF, 82 ohm |
| RH07 | 24366101 | CF, 100 ohm |
| RH08 | 24366103 | CF, 10k ohm |
| RH09 | 24890102 | CF, 1k ohm, 1/4W |
| RH10 | 24366473 | CF, 47k ohm |
| RH20 | 24366750 | CF, 75 ohm |
| RH21 | 24366750 | CF, 75 ohm |
| RH23 | 24366750 | CF, 75 ohm |
| RH24 | 24366102 | CF, 1k ohm |
| RH25 | 24890820 | CF, 82 ohm, 1/4W |
| RH26 | 24890750 | CF, 75 ohm, 1/4W |
| RH27 | 24890101 | CF, 100 ohm, 1/4W |
| RH30 | 24366682 | CF, 6800 ohm |
| RH31 | 24366122 | CF, 1200 ohm |
| RH32 | 24366272 | CF, 2700 ohm |
| RH34 | 24366682 | CF, 6800 ohm |
| RH35 | 24366122 | CF, 1200 ohm |
| RH36 | 24366272 | CF, 2700 ohm |
| △ RH41 | 24552331 | OMF, 330 ohm, 1/2W |
| RH52 | 24069814 | VR, 5k ohm, 0.08W, CC |
| RH70 | 24366563 | CF, 56k ohm |
| RH72 | 24890563 | CF, 56k ohm, 1/4W |
| △ RH80 | 24552221 | OMF, 220 ohm, 1/2W |
| RH91 | 24366101 | CF, 100 ohm |
| RH94 | 24366103 | CF, 10k ohm |
| RH95 | 24366562 | CF, 5600 ohm |
| RH96 | 24366820 | CF, 82 ohm |
| △ RH97 | 24552331 | OMF, 330 ohm, 1/2W |
| RH98 | 24366102 | CF, 1k ohm |
| RH99 | 24366473 | CF, 47k ohm |
| RK01 | 24366223 | CF, 22k ohm |
| RK02 | 24366103 | CF, 10k ohm |
| RK03 | 24366220 | CF, 22 ohm |
| RK04 | 24366222 | CF, 2200 ohm |
| △ RK05 | 24552470 | OMF, 47 ohm, 1/2W |
| RM01 | 24366101 | CF, 100 ohm |
| RM02 | 24366271 | CF, 270 ohm |
| RM03 | 24366104 | CF, 100k ohm |
| RM04 | 24366102 | CF, 1k ohm |
| RM07 | 24366153 | CF, 15k ohm |
| RM08 | 24890103 | CF, 10k ohm, 1/4W |

| Location No. | Part No. | Description |
|--------------|----------|------------------------|
| RM11 | 24366332 | CF, 3300 ohm |
| RM12 | 24366151 | CF, 150 ohm |
| RM13 | 24366332 | CF, 3300 ohm |
| RM14 | 24366151 | CF, 150 ohm |
| RM15 | 24366332 | CF, 3300 ohm |
| RM16 | 24366151 | CF, 150 ohm |
| RM18 | 24366122 | CF, 1200 ohm |
| RM20 | 24890104 | CF, 100k ohm, 1/4W |
| RM21 | 24366103 | CF, 10k ohm |
| RM22 | 24366152 | CF, 1500 ohm |
| RM23 | 24366152 | CF, 1500 ohm |
| RM24 | 24366332 | CF, 3300 ohm |
| RM25 | 24366681 | CF, 680 ohm |
| RM26 | 24366471 | CF, 470 ohm |
| RM27 | 24366152 | CF, 1500 ohm |
| RM28 | 24366152 | CF, 1500 ohm |
| RM29 | 24366332 | CF, 3300 ohm |
| RM30 | 24366331 | CF, 330 ohm |
| RM32 | 24546569 | FR, 5.6 ohm, 1/2W |
| RM34 | 24366681 | CF, 680 ohm |
| RM35 | 24366272 | CF, 2700 ohm |
| RM36 | 24366563 | CF, 56k ohm |
| RM40 | 24366392 | CF, 3900 ohm |
| RM65 | 24366223 | CF, 22k ohm |
| RM66 | 24366103 | CF, 10k ohm |
| RM67 | 24366682 | CF, 6800 ohm |
| RM68 | 24366562 | CF, 5600 ohm |
| RM70 | 24366471 | CF, 470 ohm |
| RM71 | 24366271 | CF, 270 ohm |
| RM72 | 24366471 | CF, 470 ohm |
| RM73 | 24366393 | CF, 39k ohm |
| RM74 | 24366471 | CF, 470 ohm |
| RM75 | 24366222 | CF, 2200 ohm |
| RM76 | 24366103 | CF, 10k ohm |
| RM77 | 24890222 | CF, 2200 ohm, 1/4W |
| RM80 | 24366103 | CF, 10k ohm |
| RM81 | 24366332 | CF, 3300 ohm |
| RM82 | 24366472 | CF, 4700 ohm |
| RM83 | 24366562 | CF, 5600 ohm |
| RM84 | 24366562 | CF, 5600 ohm |
| △ RR01 | 24327753 | MF, 75k ohm, ±1%, 1/4W |
| RR02 | 24366472 | CF, 4700 ohm |
| RR03 | 24366472 | CF, 4700 ohm |
| RR04 | 24366102 | CF, 1k ohm |
| RR05 | 24366102 | CF, 1k ohm |
| RR06 | 24366103 | CF, 10k ohm |
| RR81 | 24366182 | CF, 1800 ohm |
| RR82 | 24890103 | CF, 10k ohm, 1/4W |
| RR83 | 24366272 | CF, 2700 ohm |
| △ RR84 | 24376683 | CF, 68k ohm, 1/2W |
| △ RS01 | 24321109 | OMF, 1 ohm, 1/2W |
| RS03 | 24890472 | CF, 4700 ohm, 1/4W |
| △ RS04 | 24382821 | OMF, 820 ohm, 1W |
| △ RS05 | 24531150 | FR, 15 ohm, 1/2W |
| RS06 | 24890152 | CF, 1500 ohm, 1/4W |
| RS07 | 24366102 | CF, 1k ohm |
| RS08 | 24366330 | CF, 33 ohm |
| RV01 | 24366821 | CF, 820 ohm |
| RV02 | 24366102 | CF, 1k ohm |
| RV03 | 24366101 | CF, 100 ohm |
| RV04 | 24890152 | CF, 1500 ohm, 1/4W |
| RV05 | 24890101 | CF, 100 ohm, 1/4W |
| RV06 | 24890101 | CF, 100 ohm, 1/4W |
| RV07 | 24366101 | CF, 100 ohm |

| Location No. | Part No. | Description |
|--------------|----------|--------------------|
| RV10 | 24366221 | CF, 220 ohm |
| RV11 | 24890221 | CF, 220 ohm, 1/4W |
| RV12 | 24366221 | CF, 220 ohm |
| RV13 | 24890101 | CF, 100 ohm, 1/4W |
| RV14 | 24366393 | CF, 39k ohm |
| RV15 | 24366473 | CF, 47k ohm |
| RV16 | 24366473 | CF, 47k ohm |
| RV17 | 24366102 | CF, 1k ohm |
| RV18 | 24366222 | CF, 2200 ohm |
| RV19 | 24366103 | CF, 10k ohm |
| RV20 | 24890103 | CF, 10k ohm, 1/4W |
| △ RV21 | 24552471 | OMF, 470 ohm, 1/2W |
| RV22 | 24366121 | CF, 120 ohm |
| RV23 | 24366121 | CF, 120 ohm |
| RV24 | 24366121 | CF, 120 ohm |
| RV25 | 24366821 | CF, 820 ohm |
| RV26 | 24366105 | CF, 1M ohm |
| RV27 | 24366105 | CF, 1M ohm |
| RV28 | 24890105 | CF, 1M ohm, 1/4W |
| RV29 | 24366562 | CF, 5600 ohm |
| RV30 | 24890103 | CF, 10k ohm, 1/4W |
| RV31 | 24366472 | CF, 4700 ohm |
| RV32 | 24366272 | CF, 2700 ohm |
| RV33 | 24890103 | CF, 10k ohm, 1/4W |
| RV34 | 24366472 | CF, 4700 ohm |
| RV35 | 24366103 | CF, 10k ohm |
| RV36 | 24890103 | CF, 10k ohm, 1/4W |
| RV37 | 24366103 | CF, 10k ohm |
| RV38 | 24890101 | CF, 100 ohm, 1/4W |
| RV39 | 24890222 | CF, 2200 ohm, 1/4W |
| RV40 | 24366392 | CF, 3900 ohm |
| RV41 | 24366102 | CF, 1k ohm |
| RV42 | 24366332 | CF, 3300 ohm |
| RV43 | 24890472 | CF, 4700 ohm, 1/4W |
| RV44 | 24366102 | CF, 1k ohm |
| RV45 | 24366103 | CF, 10k ohm |
| RV46 | 24890821 | CF, 820 ohm, 1/4W |
| RV47 | 24366332 | CF, 3300 ohm |
| RV60 | 24890101 | CF, 100 ohm, 1/4W |
| RV61 | 24366101 | CF, 100 ohm |
| RV62 | 24366101 | CF, 100 ohm |
| RV63 | 24366102 | CF, 1k ohm |
| RV64 | 24366682 | CF, 6800 ohm |
| RV65 | 24366223 | CF, 22k ohm |
| RV66 | 24890102 | CF, 1k ohm, 1/4W |
| RV67 | 24366102 | CF, 1k ohm |
| RV68 | 24890101 | CF, 100 ohm, 1/4W |
| RV69 | 24366332 | CF, 3300 ohm |
| RV73 | 24366821 | CF, 820 ohm |
| RV74 | 24366821 | CF, 820 ohm |
| RV75 | 24366821 | CF, 820 ohm |
| RV76 | 24366392 | CF, 3900 ohm |
| RV77 | 24366392 | CF, 3900 ohm |
| RV78 | 24366392 | CF, 3900 ohm |
| △ RV80 | 24552181 | OMF, 180 ohm, 1/2W |
| △ RV81 | 24552181 | OMF, 180 ohm, 1/2W |
| △ RV82 | 24552271 | OMF, 270 ohm, 1/2W |
| RV90 | 24366151 | CF, 150 ohm |
| RV91 | 24366473 | CF, 47k ohm |
| RV92 | 24366562 | CF, 5600 ohm |
| RV93 | 24890103 | CF, 10k ohm, 1/4W |

| Location No. | Part No. | Description |
|---------------------------------|----------|--------------------------------------|
| COILS & TRANSFORMERS | | |
| L102 | 23262856 | Coil, PIF, TRF1452 |
| L103 | 23262783 | Coil, IF Coil, TRF1105 |
| L105 | 23237991 | Coil, Peaking, TRF4479AC |
| L107 | 23262961 | Coil, PIF Trap, TRF1411 |
| L108 | 23262843 | Coil, PIF Trap, TRF1457 |
| L109 | 23221937 | Coil, RF Choke, TLN3040 |
| L110 | 23237977 | Coil, Peaking, TRF4680AC |
| L130 | 23237977 | Coil, Peaking, TRF4680AC |
| L162 | 23261986 | Coil, RF Choke, TRF9220 |
| L171 | 23262813 | Coil, IF Coil, TRF1077 |
| L201 | 23237987 | Coil, Peaking, TRF4100AC |
| L203 | 23237981 | Coil, Peaking, TRF4330AC |
| L406 | 23103940 | Coil(Ferrite Bead), TEM2001 |
| L407 | 23238934 | Coil, Peaking, TRF4109AC |
| L410 | 23221026 | Coil, RF Choke, AZ-9004Y |
| L411 | 23222667 | Coil, Linearity, TLN2062 |
| L412 | 23221970 | Coil, RF Choke, TLN3009 |
| △ L462 | 23227439 | Deflection Yoke, AT6060/00 |
| L501 | 23237982 | Coil, Peaking, TRF4270AC |
| L502 | 23237985 | Coil, Peaking, TRF4150AC |
| L503 | 23237973 | Coil, Peaking, TRF4151AC |
| L551 | 23250972 | Coil, 1H-Delay Matching, TRF5418 |
| L552 | 23250943 | Coil, IF Coil, TRF5426 |
| L601 | 23237986 | Coil, Peaking, TRF4120AC |
| L630 | 23237977 | Coil, Peaking, TRF4680AC |
| L661 | 23221058 | Coil, RF Choke, TLN1015C |
| L662 | 23221058 | Coil, RF Choke, TLN1015C |
| L802 | 23103940 | Coil(Ferrite Bead), TEM2001 |
| L803 | 23103940 | Coil(Ferrite Bead), TEM2001 |
| L830 | 23261975 | Coil, RF Choke, TRF9229 |
| L831 | 23221060 | Coil, RF Choke, TLN1015E |
| L832 | 23221060 | Coil, RF Choke, TLN1015E |
| △ L901 | 23200780 | Coil, Degaussing, TSB-2230 |
| LA11 | 23239835 | Coil, Peaking, TRF4109AJ |
| LB01 | 23262776 | Coil, IF Coil, TRF1114 |
| LB02 | 23239835 | Coil, Peaking, TRF4109AJ |
| LH02 | 23221058 | Coil, RF Choke, TLN1015C |
| LH05 | 23221058 | Coil, RF Choke, TLN1015C |
| LH90 | 23221058 | Coil, RF Choke, TLN1015C |
| LH92 | 23237975 | Coil, Peaking, TRF4101AC |
| LK01 | 23232963 | Coil, Variable, TRF3055 |
| LK02 | 23238722 | Coil, Peaking, TRF4822AI |
| LM51 | 23262797 | Coil, IF Coil, TRF1093 |
| LM52 | 23262798 | Coil, IF Coil, TRF1092 |
| LM53 | 23262798 | Coil, IF Coil, TRF1092 |
| LM54 | 23262798 | Coil, IF Coil, TRF1092 |
| LM56 | 23237894 | Coil, Peaking, TRF4472AE |
| LM57 | 23237988 | Coil, Peaking, TRF4829AC |
| LM58 | 23237988 | Coil, Peaking, TRF4829AC |
| △ T401 | 23224983 | Transformer, Hariz Drive, TLN1039 |
| △ T461 | 23236052 | Transformer, Flyback, AT2079109 |
| T801 | 23211940 | Transformer, TRF3121C |
| △ T802 | 23213673 | Transformer, Converter, TPW3079 |

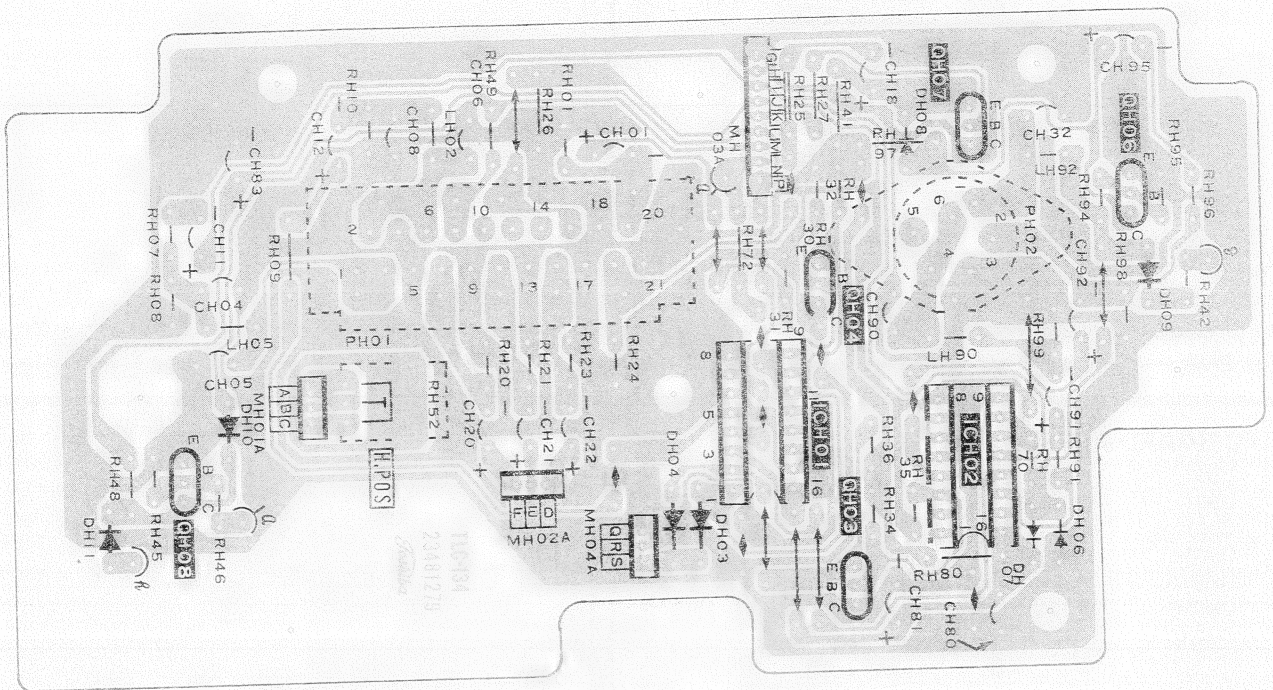
| Location No. | Part No. | Description |
|-----------------------|----------|---------------------------|
| SEMICONDUCTORS | | |
| IC101 | 23119143 | IC, M51365SP |
| IC303 | 23119533 | IC, TDA3651A |
| IC501 | B0357050 | IC, TA7699AP |
| IC621 | 23119532 | IC, TDA-1015 |
| ICA01 | 23119067 | IC, TMP47C432N-8682 |
| ICA02 | 23119101 | IC, M58655P |
| ICA03 | 23119182 | IC, PD6336C |
| ICA04 | 23119100 | IC, M50450-022P |
| ICA13 | B0272490 | IC, TD6350P |
| ICH01 | B0470532 | IC, TC4053BP |
| ICK01 | 23119566 | IC, μ PC1474HA |
| ICM01 | 23119724 | IC, M51397AP |
| ICV01 | B0379280 | IC, TA8628N |
| ICV02 | 23119138 | IC, μ PC1417CA |
| ICV03 | B0471000 | IC, TC40H000P |
| ICV04 | 23119139 | IC, AN5862K |
| Q161 | A6708871 | Transistor, 2SC388ATM |
| Q201 | 23114689 | Transistor, BC547A |
| Q203 | 23114689 | Transistor, BC547A |
| Q205 | 23114689 | Transistor, BC547A |
| Q207 | 23114689 | Transistor, BC547A |
| Q208 | 23114689 | Transistor, BC547A |
| Q302 | 23114691 | Transistor, BC557A |
| Q402 | A6330004 | Transistor, 2SC2482 FA-1 |
| △ Q404 | A6868654 | Transistor, 2SD1426 |
| Q404D | A8012650 | Spacer For Tr., AC263 |
| Q505 | 23114693 | Transistor, BF871 |
| Q506 | A6330000 | Transistor, 2SC2482 |
| Q507 | 23114693 | Transistor, BF871 |
| Q508 | A6330000 | Transistor, 2SC2482 |
| Q509 | 23114693 | Transistor, BF871 |
| Q510 | A6330000 | Transistor, 2SC2482 |
| Q601 | 23114689 | Transistor, BC547A |
| Q622 | 23114632 | Transistor, BC547B |
| Q680 | 23114689 | Transistor, BC547A |
| Q681 | 23114689 | Transistor, BC547A |
| Q682 | 23114691 | Transistor, BC557A |
| Q683 | 23114691 | Transistor, BC557A |
| Q801 | 23314098 | Transistor(STR), STR54041 |
| Q802 | 23114632 | Transistor, BC547B |
| Q803 | A6534125 | Transistor, 2SA1020-Y |
| Q830 | A6358055 | Transistor, 2SC3182N FA-1 |
| Q831 | A6547300 | Transistor, 2SA1321 |
| QA05 | 23114689 | Transistor, BC547A |
| QA06 | 23114691 | Transistor, BC557A |
| QA07 | 23114691 | Transistor, BC557A |
| QA08 | 23114691 | Transistor, BC557A |
| QA10 | 23114689 | Transistor, BC547A |
| QA11 | 23114689 | Transistor, BC547A |
| QA12 | 23114689 | Transistor, BC547A |
| QA20 | 23114689 | Transistor, BC547A |
| QA21 | 23114632 | Transistor, BC547B |
| QA30 | 23114691 | Transistor, BC557A |
| QA31 | 23114689 | Transistor, BC547A |
| QA80 | 23114691 | Transistor, BC557A |
| QB02 | 23114689 | Transistor, BC547A |
| QB03 | 23114689 | Transistor, BC547A |
| QH03 | 23114691 | Transistor, BC557A |
| QH04 | 23114691 | Transistor, BC557A |
| QH06 | 23114689 | Transistor, BC547A |
| QH07 | 23114691 | Transistor, BC557A |
| QM02 | 23114691 | Transistor, BC557A |
| QM08 | 23114689 | Transistor, BC547A |

| Location No. | Part No. | Description |
|--------------|-------------|-----------------------------|
| QM12 | 23114691 | Transistor, BC557A |
| QM13 | 23114689 | Transistor, BC547A |
| QR01 | 23114632 | Transistor, BC547B |
| QR02 | 23114632 | Transistor, BC547B |
| QR03 | 23114632 | Transistor, BC547B |
| QR04 | 23114546 | Transistor, BC557B |
| QR05 | A6324942 | Transistor, 2SC2229-Y |
| QS01 | 23114546 | Transistor, BC557B |
| QS02 | A6842185 | Transistor, 2SD553-Y |
| QS03 | 23114546 | Transistor, BC557B |
| QV05 | 23114691 | Transistor, BC557A |
| QV06 | 23114691 | Transistor, BC557A |
| QV07 | 23114689 | Transistor, BC547A |
| QV08 | 23114689 | Transistor, BC547A |
| QV09 | 23114689 | Transistor, BC547A |
| QV10 | 23114689 | Transistor, BC547A |
| QV11 | 23114691 | Transistor, BC557A |
| D202 | 23115599 | Diode, 1N4148 |
| D203 | 23115599 | Diode, 1N4148 |
| D204 | 23115599 | Diode, 1N4148 |
| D205 | 23115599 | Diode, 1N4148 |
| D206 | A7150041 | Diode, 1SS104 |
| D212 | 23115599 | Diode, 1N4148 |
| D213 | A7150041 | Diode, 1SS104 |
| D214 | 23115599 | Diode, 1N4148 |
| D241 | 23115599 | Diode, 1N4148 |
| D242 | 23115599 | Diode, 1N4148 |
| D243 | A7150041 | Diode, 1SS104 |
| D244 | 23115599 | Diode, 1N4148 |
| D301 | 23115599 | Diode, 1N4148 |
| D302 | 23118479 | Diode, BYD33J |
| D305 | 23118479 | Diode, BYD33J |
| D309 | 23115598 | Diode, 1N4003 |
| D315 | A7110160 | Diode, Zener, 05Z7.5Y |
| D371 | 23115526 | Diode, Zener, BZX79B5V1 |
| D406 | 23118479 | Diode, BYD33J |
| D408 | 23118994 | Diode, BYW95C |
| D415 | 23115599 | Diode, 1N4148 |
| D416 | A7110312 | Diode, Zener, 05Z10Y |
| D561 | A7150041 | Diode, 1SS104 |
| D591 | 23115599 | Diode, 1N4148 |
| D592 | 23115599 | Diode, 1N4148 |
| D593 | 23115599 | Diode, 1N4148 |
| D681 | 23115599 | Diode, 1N4148 |
| D682 | 23115599 | Diode, 1N4148 |
| D801 | A7568410 | Diode, TVR-4J |
| D802 | A7568410 | Diode, TVR-4J |
| D803 | A7568410 | Diode, TVR-4J |
| D804 | A7568410 | Diode, TVR-4J |
| D811 | 23118479 | Diode, BYD33J |
| D812 | 23118736 | Diode, BYV96E |
| D813 | 23118479 | Diode, BYD33J |
| D814 | A7116615 | Diode, Zener, 04AZ6.8Y |
| D815 | 23118479 | Diode, BYD33J |
| D830 | 23118994 | Diode, BYW95C |
| D831 | 23118479 | Diode, BYD33J |
| DA03 | 23115599 | Diode, 1N4148 |
| DA04 | 23115599 | Diode, 1N4148 |
| DA05 | 23115922 | Diode, Zener, μ PC574J |
| DA05 | or 23115878 | Diode, Zener, μ PC574JC |
| DA14 | 23115599 | Diode, 1N4148 |
| DA26 | 23115599 | Diode, 1N4148 |
| DA27 | 23115599 | Diode, 1N4148 |
| DA28 | 23115599 | Diode, 1N4148 |

| Location No. | Part No. | Description |
|----------------------|----------|---------------------------|
| DA70 | 23115599 | Diode, 1N4148 |
| DA71 | 23115599 | Diode, 1N4148 |
| DA72 | 23115599 | Diode, 1N4148 |
| DA80 | 23118969 | Diode(LED), MV57124, Red |
| DA81 | 23115599 | Diode, 1N4148 |
| DH03 | A7288601 | Diode, 1S2186 FA-1 |
| DH04 | A7288601 | Diode, 1S2186 FA-1 |
| DH06 | 23115599 | Diode, 1N4148 |
| DH07 | 23115599 | Diode, 1N4148 |
| DH08 | 23115599 | Diode, 1N4148 |
| DK01 | 23118482 | Diode, BPW41N |
| DM01 | 23115599 | Diode, 1N4148 |
| DM02 | 23115599 | Diode, 1N4148 |
| DM05 | 23115525 | Diode, Zener, BZX79B12 |
| DM06 | 23115599 | Diode, 1N4148 |
| DM07 | 23115599 | Diode, 1N4148 |
| DM08 | 23115599 | Diode, 1N4148 |
| DM21 | 23115599 | Diode, 1N4148 |
| DR01 | 23115599 | Diode, 1N4148 |
| DR02 | 23115599 | Diode, 1N4148 |
| DR03 | 23115599 | Diode, 1N4148 |
| DR10 | A8641942 | Diode, TLP631-GB |
| DS01 | 23118479 | Diode, BYD33J |
| DS02 | 23118610 | Diode, Zener, RD30ES-B4 |
| DS03 | A7116305 | Diode, Zener, 04AZ5.1X |
| DV01 | 23115599 | Diode, 1N4148 |
| DV02 | 23115599 | Diode, 1N4148 |
| DV03 | 23115599 | Diode, 1N4148 |
| DV30 | 23115599 | Diode, 1N4148 |
| DV31 | 23115599 | Diode, 1N4148 |
| DV32 | 23115599 | Diode, 1N4148 |
| DV33 | 23115599 | Diode, 1N4148 |
| DV34 | 23115599 | Diode, 1N4148 |
| DV35 | 23115599 | Diode, 1N4148 |
| DV60 | 23115599 | Diode, 1N4148 |
| DV70 | 23115535 | Diode, OA91 |
| DV71 | 23115535 | Diode, OA91 |
| DV72 | 23115535 | Diode, OA91 |
| DV73 | 23115535 | Diode, OA91 |
| DV74 | 23115535 | Diode, OA91 |
| DV75 | 23115535 | Diode, OA91 |
| DV80 | 23115526 | Diode, Zener, BZX79B5V1 |
| MISCELLANEOUS | | |
| △ F801 | 23144896 | Fuse, T2.0A |
| F801A | 23845691 | Fuse Clip |
| K902 | 23120713 | Remote Hand Unit, CT-9176 |
| P661 | 23364857 | Earphone Jack, 3,5 |
| △ P801 | 23176827 | Power Cord |
| PH01 | 23901735 | TV Socket, PTE8787 |
| PH02 | 23901653 | Socket, 5P, DIN |
| △ S801 | 23145583 | Switch, Push, 2C2P |
| SA01 | 23145435 | Switch, Key, KSA-VL |
| SA02 | 23145435 | Switch, Key, KSA-VL |
| SA03 | 23145435 | Switch, Key, KSA-VL |
| SA04 | 23145435 | Switch, Key, KSA-VL |
| SA05 | 23145435 | Switch, Key, KSA-VL |
| SA06 | 23145435 | Switch, Key, KSA-VL |
| SA07 | 23145435 | Switch, Key, KSA-VL |
| SA08 | 23145435 | Switch, Key, KSA-VL |
| SA09 | 23145435 | Switch, Key, KSA-VL |
| △ V901A | 23901874 | Socket, Picture Tube, 8P |
| W201 | 23250937 | Coil, Delay Line, TRF2054 |

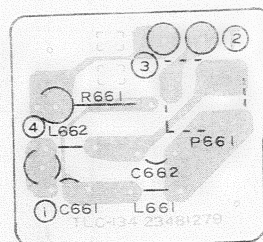
A/V SOCKET BOARD PW5341-1

BOTTOM (FOIL) SIDE



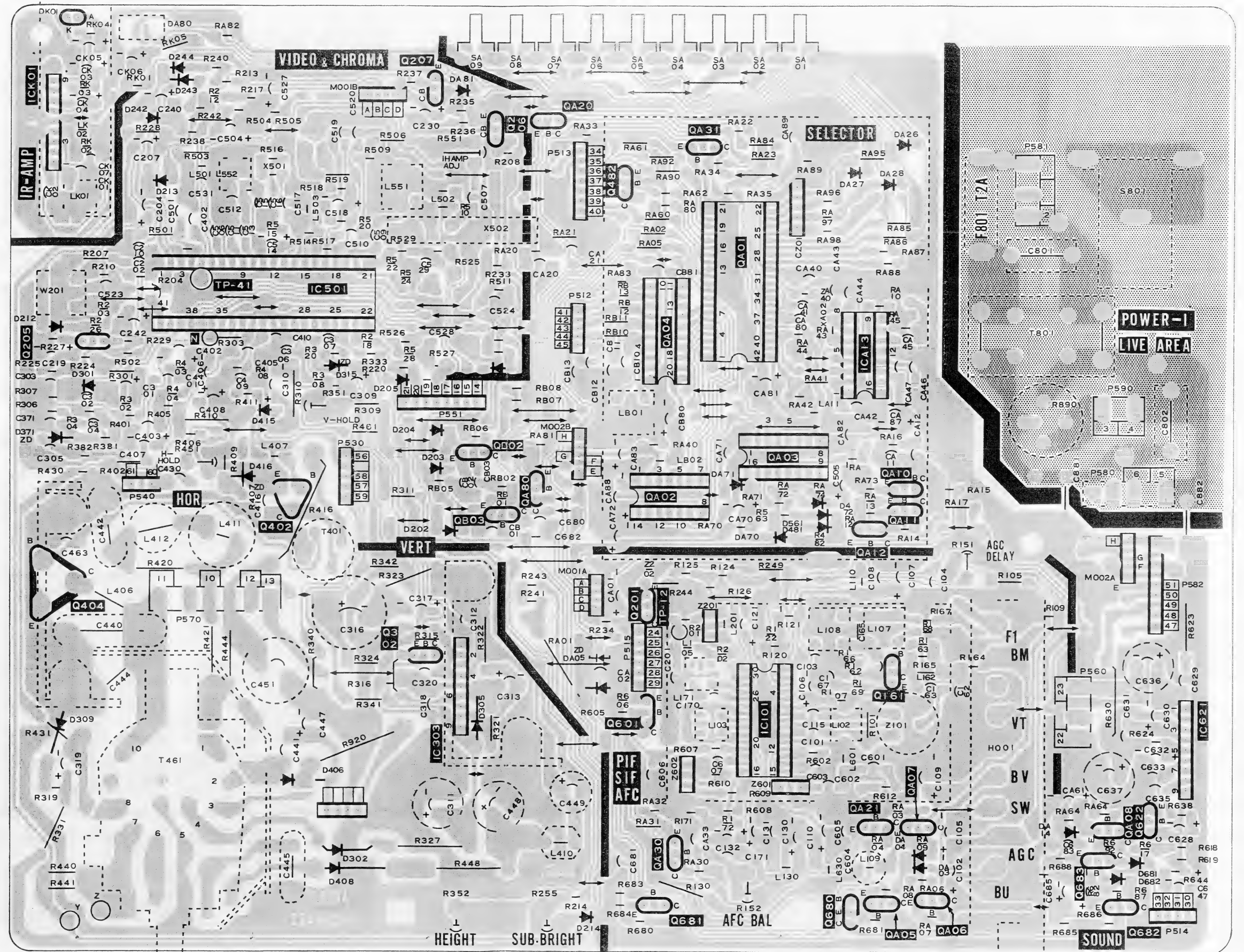
HEADPHONE BOARD PW5341-3

BOTTOM (FOIL) SIDE



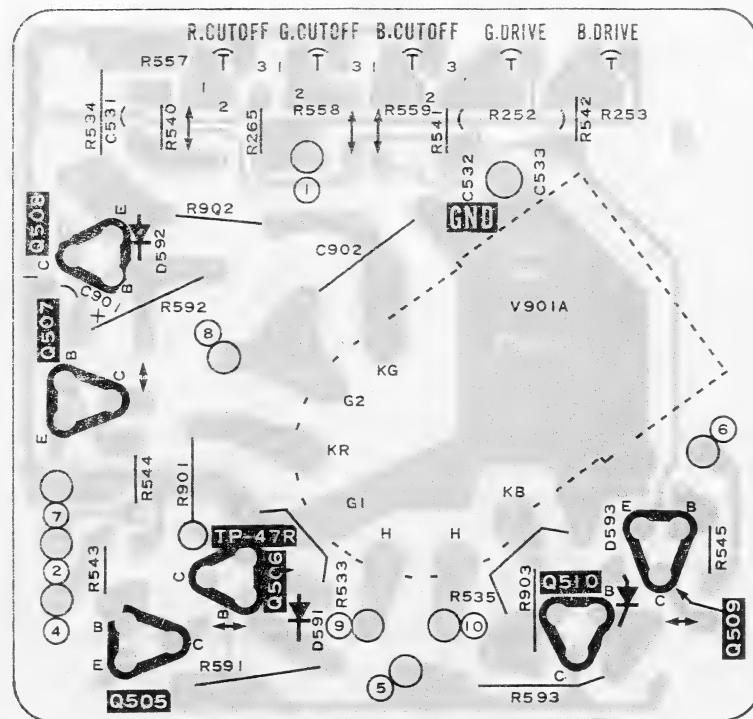
MAIN BOARD PW5338

BOTTOM (FOIL) SIDE



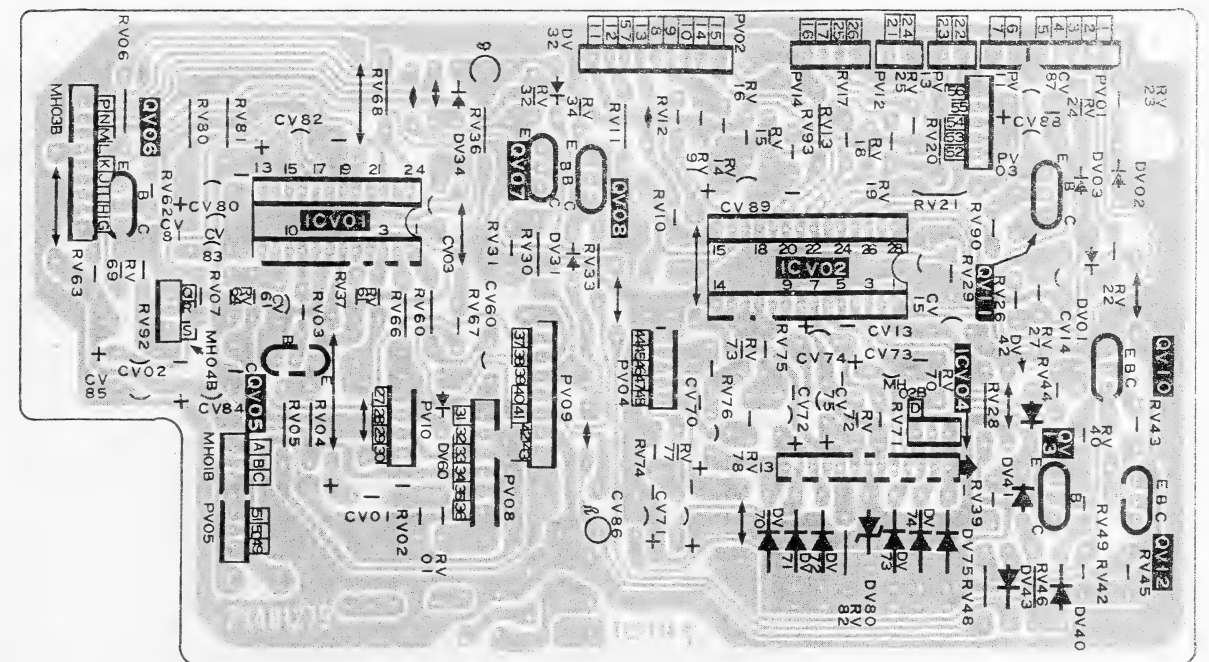
CRT DRIVE BOARD PW5339

BOTTOM (FOIL) SIDE



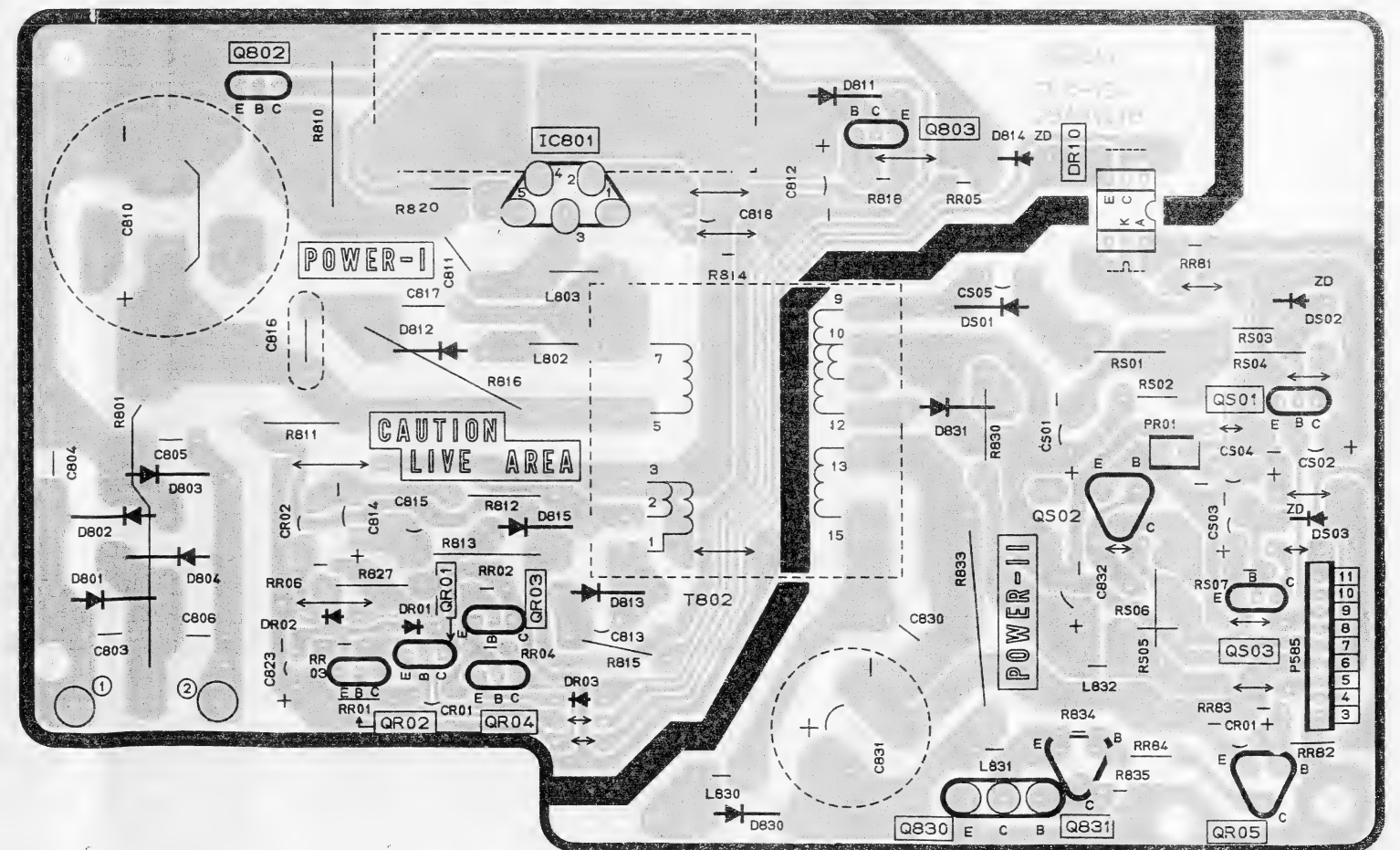
A/V BOARD PW5341-2

BOTTOM (FOIL) SIDE



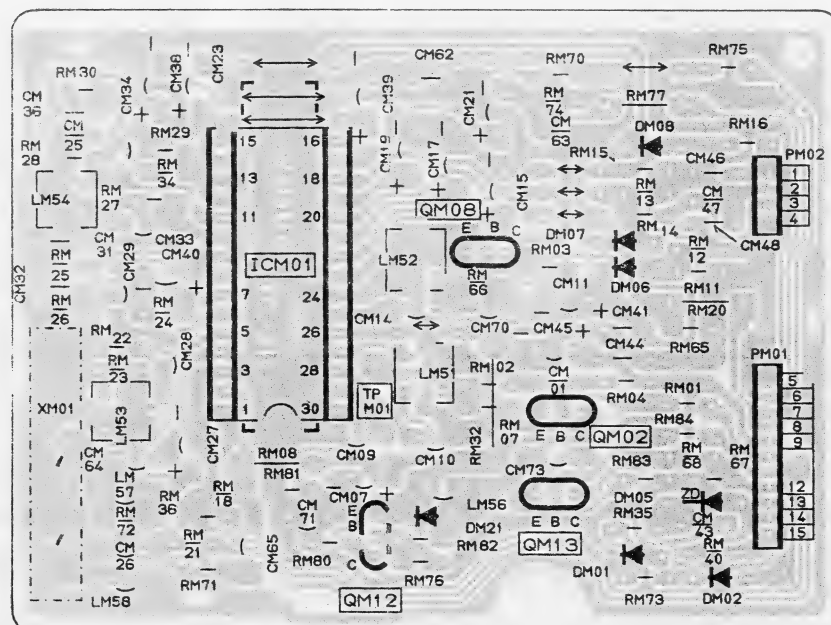
POWER BOARD PW5653

BOTTOM (FOIL) SIDE



SECAM CHROMA BOARD PW5631

BOTTOM SIDE



TERMINAL VIEW OF TRANSISTOR

①

BC327
BC337
BC547A
BC547B
BC547C
BC557A
BC557B
BF324



②

2SK30ATM



③

BD202



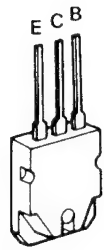
④

BF871
2SD553



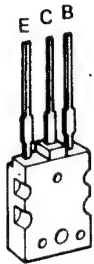
⑤

2SC3678
2SC3182N



⑥

2SD1426



⑦

2SC2482
2SA1321
2SC2229
2SA1020



⑧

2SC388ATM
2SA1015

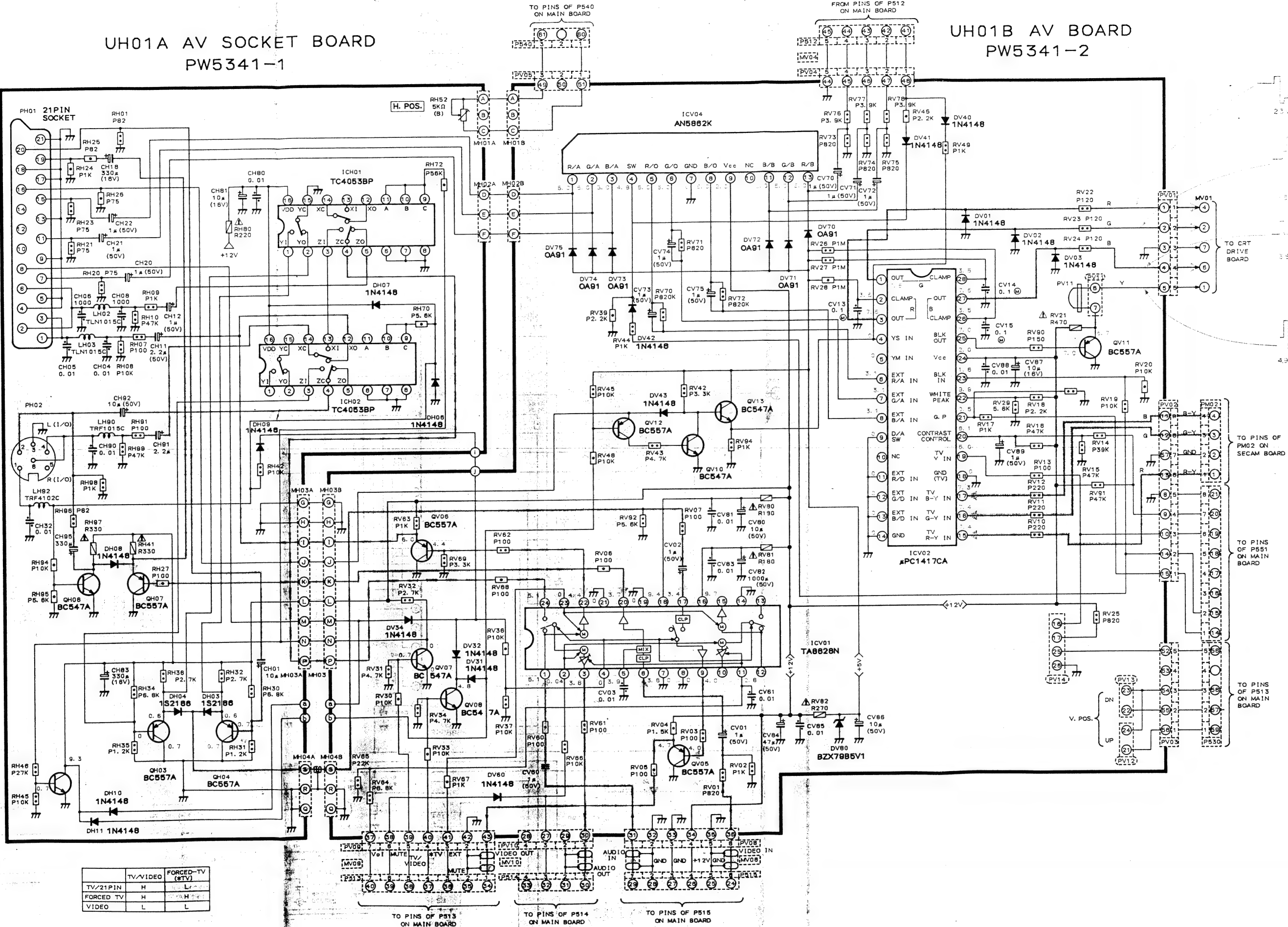


A large rectangular area with horizontal dashed lines for writing.

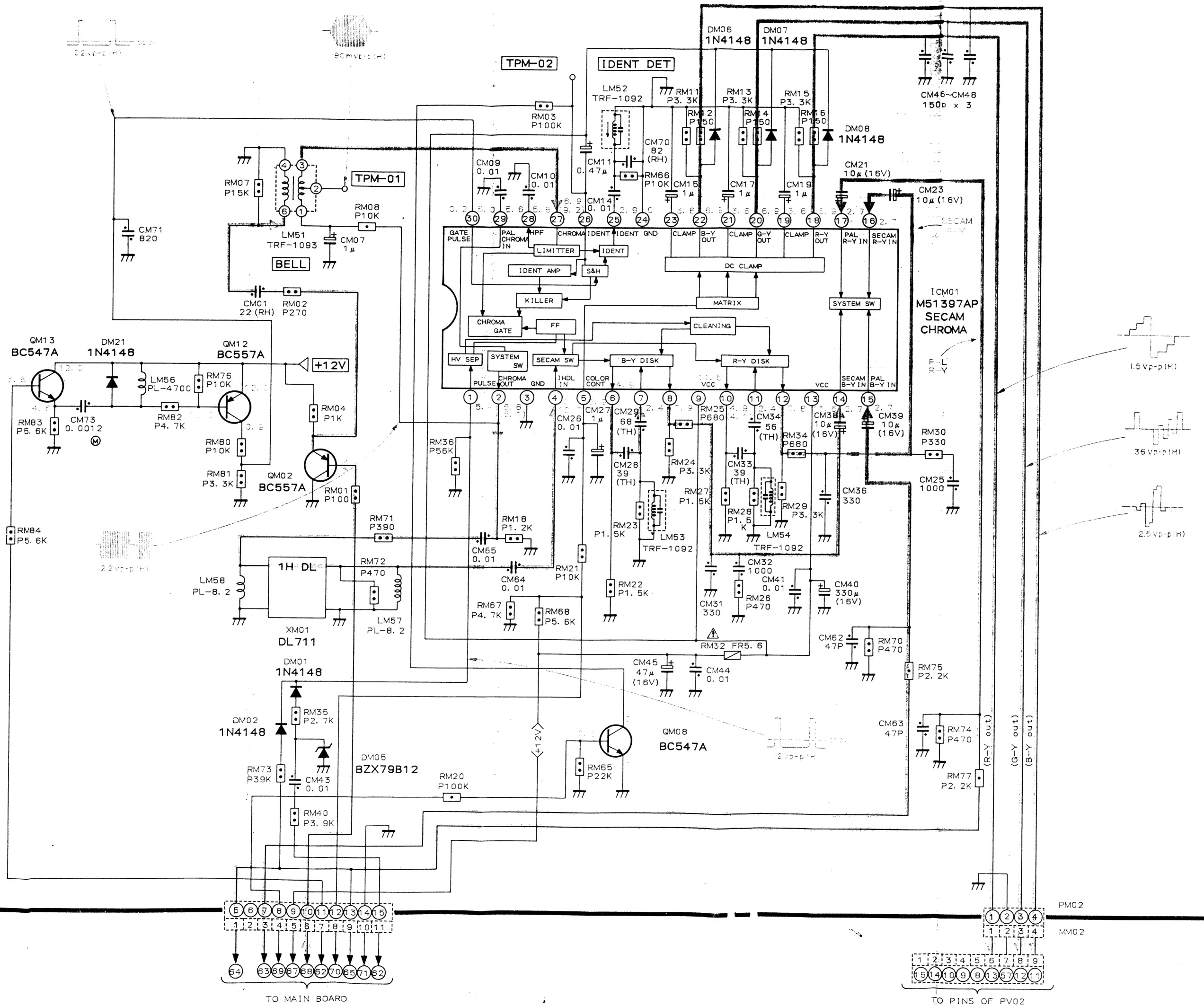
UH01A AV SOCKET BOARD PW5341-1

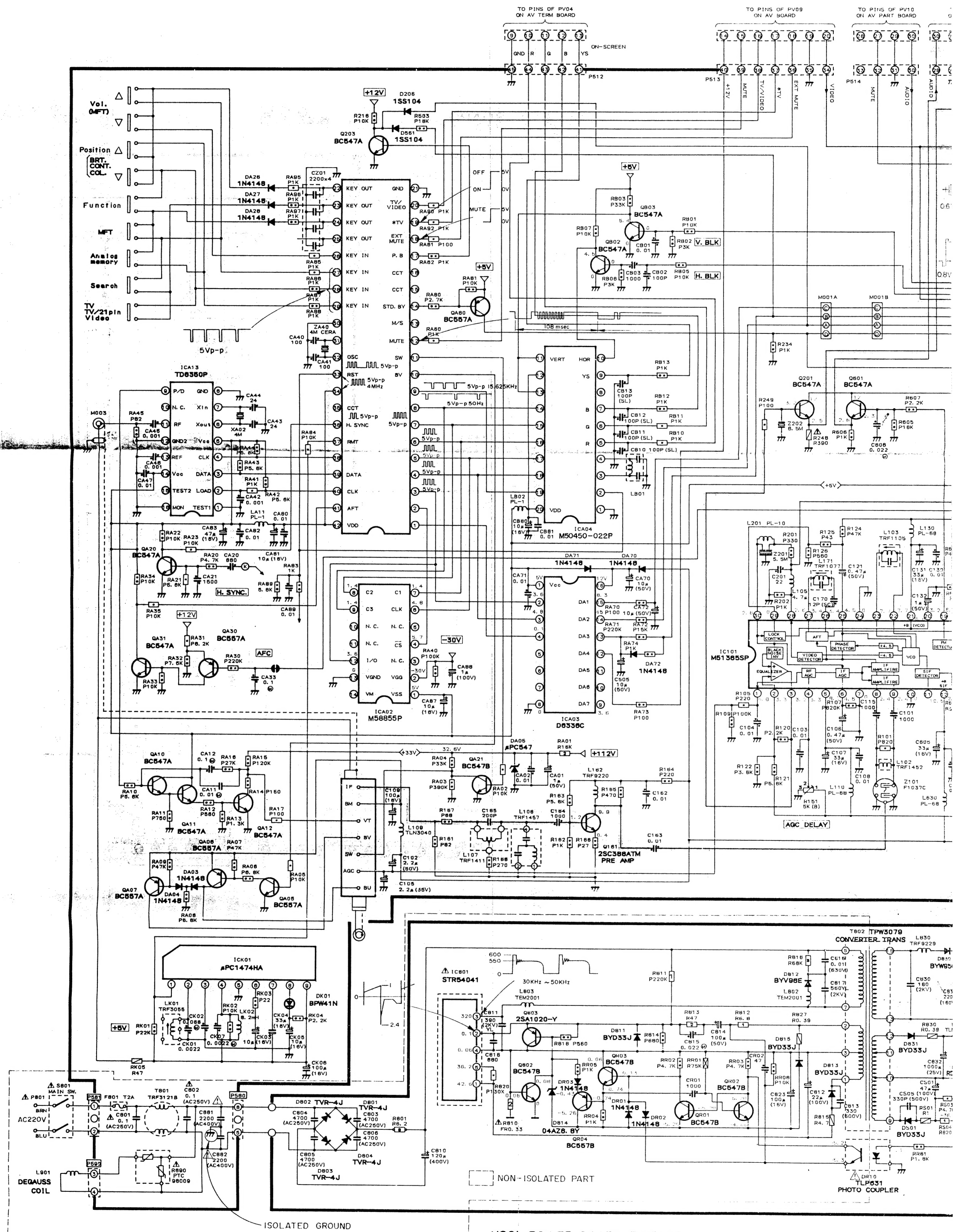
UH01B AV BOARD PW5341-2

| | | |
|----|----------------------|---------------------------|
| 21 | SHIELD EARTH | --- |
| 20 | VIDEO IN | 1Vpp±3dB |
| 19 | VIDEO OUT | 1Vpp±3dB |
| 18 | RAPID BLANKING EARTH | --- |
| 17 | VIDEO | --- |
| 16 | RAPID BLANKING | 0.0-0.4V 1.1-1.3V |
| 15 | RED IN | 0.7Vpp±3dB |
| 14 | NC | --- |
| 13 | RED EARTH | --- |
| 12 | NC | --- |
| 11 | GREEN IN | 0.7Vpp±3dB |
| 10 | NC | --- |
| 9 | GREEN EARTH | --- |
| 8 | EXT. TV | TV: 0-2V EXT: 0.5-1.2V |
| 7 | BLUE IN | 0.7Vpp±3dB |
| 6 | AUDIO EARTH | --- |
| 5 | AUDIO OUT (L) | 0.2-2Vrms |
| 4 | AUDIO IN (L) | 0.2-2Vrms |
| 3 | AUDIO OUT (R) | 0.2-2Vrms |
| 2 | AUDIO IN (R) | 0.2-2Vrms |
| 1 | AUDIO OUT (G) | 0.2-2Vrms |



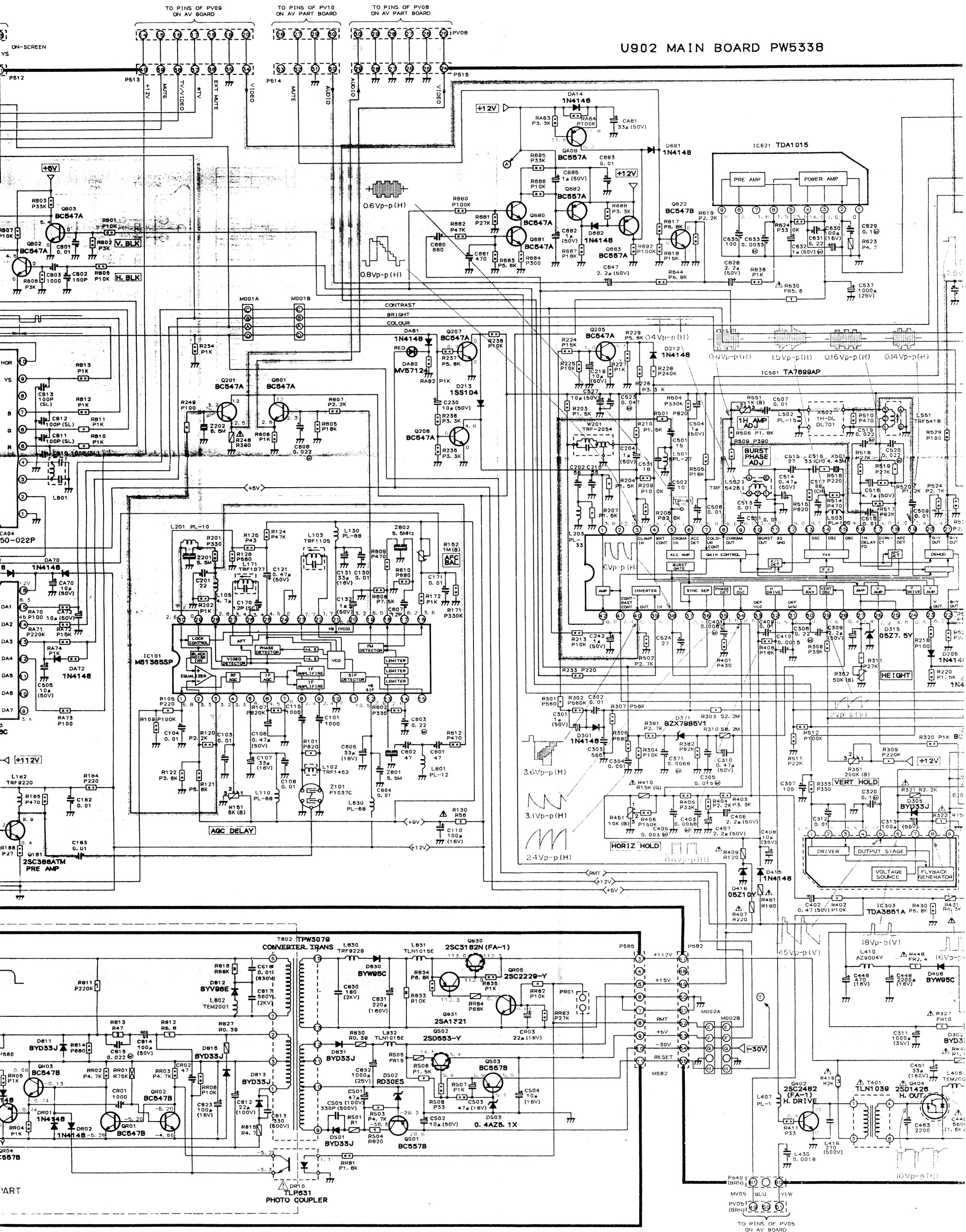
| | TV/VIDEO | FORCED-TV (MTV) |
|-----------|----------|-----------------|
| TV/21PIN | H | L |
| FORCED TV | H | L |
| VIDEO | L | L |



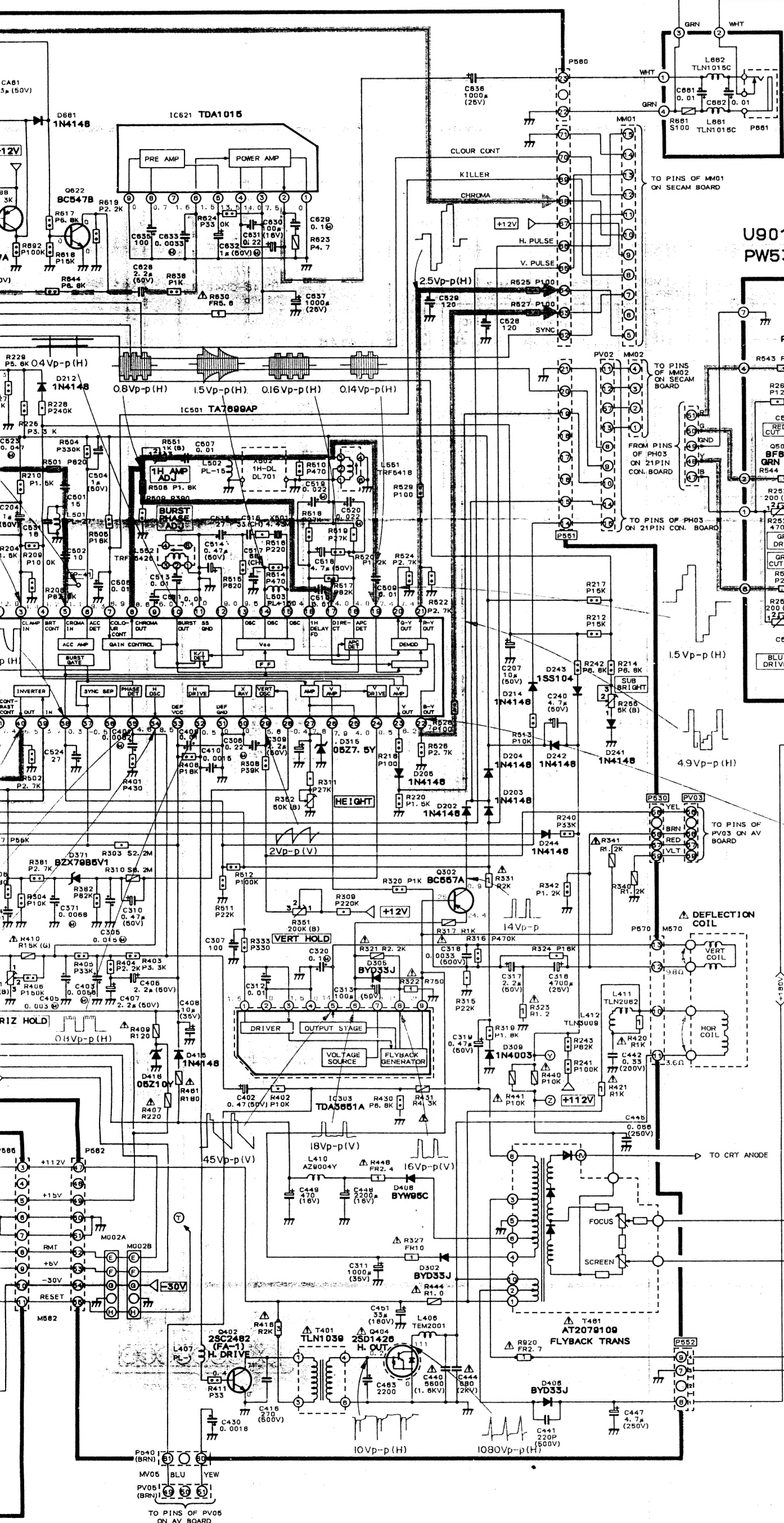


U801 POWER BOARD PW5653

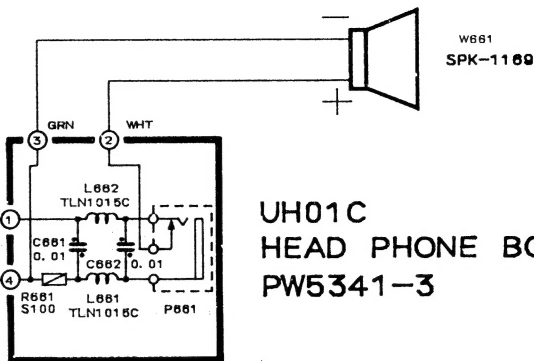
U902 MAIN BOARD PW5338



U902 MAIN BOARD PW5338



U01C HEAD PHONE BOARD PW5341-3



U901 CRT DRIVE BOARD PW5339

